

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1693.—Vol. XXXVIII.

LONDON, SATURDAY, FEBRUARY 1, 1868.

(WITH SUPPLEMENT) (STAMPED SIXPENCE. UNSTAMPED FIVEPENCE.)

M. R. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 24 years.)

Since the commencement of the present year there has been an important change for the better in the mining market, both in the demand for shares and in price. Investors are, however, extremely cautious in operating as buyers, and, in consequence, the chief business is in dividend and a select number of non-dividend shares. Several mines of great merit are attracting more than usual attention, and amongst them SUMMER HILL and WEST GODOLPHIN, the former situated at Mold, in Flintshire, in the small number of 508 shares, now paying dividends of THIRTY PER CENT. per annum on the present cost of the shares. WEST GODOLPHIN, Breage, Cornwall, in 5000 shares, has paid a first dividend, and the reports from the mine promising great success, the shares are in high favour. Mr. Crofts has SPECIAL BUSINESS in both the above mines. Bankers: National Bank of Scotland, 37, Nicholas-lane, E.C.

M. R. JOHN BUMPUS, 44, THREADNEEDLE STREET,
has FOR SALE the following shares, free of commission:—
25 Chontales, £4 ss. 9d. 10 Great Lacey, £17 7/8. 50 Rossa Grande, 13s. 9d.
10 Clifford, £2 5/8. 20 Gt. S. Chiverton, 8s 6d. 20 Rosewarne Un., 2s 9d
10 Carn Camborne, 5s. 20 Gt. Retallack, £2 19 6 50 South Grenville, 5s.
10 Calbeck Fells, 10s. 25 Gt. So. Tolgus, 23s. 20 South Darren, 34s. 6d.
10 Chiverton Moor, £6 3/4 20 Lovell Consols, 10s. 6d. 10 So. Condurrow, 11s.
10 D. Pedro, £2 16s 3d pm. 15 Marko Valley, £6 11 3 35 W. Maria & For., 16s.
10 East Russell, 27s. 3d. 20 Mining Assoc., 14s. 9d. 10 West Godolphin, 11s.
10 East Snaefell, 23s. 30 North Crofty, £2 8 3 5 W. Chiverton, £7 7 1/2
10 Gt. Grenville, £2 1/4 50 No. Treskerby, 32s. 9d. 50 W. Pr. of Wales, 10s 3d
10 Carn Brea, £2 2 1/2 45 New Quebrada, 13s 9d 50 W. Drake Walls, 8s 6d
10 East Caradon, £5 2 6 20 Prosper United, 38s. 20 Wh. Grenville, 33s 9d
10 Frontino, 18s. 6d. 50 Port Phillip, 30s. 6d. 2 W. Wh. Killy, 11s.
25 Frank Mills, 15s. 25 Prince of Wales, 62s. 15 Wheel Emily, 11s.
Cash advanced on mining shares.

GUIDE TO INVESTORS.—MR. LELEAN'S STOCK, SHARE, AND FINANCE REGISTER for February, contains a comprehensive review of the Stock and Share Markets of the past year; a list of all the dividends paid in December; a selection of Investments paying 10 to 16 per cent.; and such information as is necessary to guide intending investors. 4d. per copy, or 6s. annually, post free.
Published by Mr. BAKER LELEAN, at his offices, 11, Royal Exchange, London.

M. R. WILLIAM WARD,
STOCK AND SHAREDEALER,
No. 29, THREADNEEDLE STREET, LONDON, E.C.

M. R. JOHN BATTERS, STOCK AND MINING SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C.

M. R. WILLIAM SEWARD, STOCK AND MINING SHAREBROKER, 19, THROGMORTON STREET, LONDON, E.C.
Every description of shares BOUGHT and SOLD at the best market prices.

M. R. THOMAS SPARGO, STOCK AND SHAREDEALER, 224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

MESSRS. FREDERIC GILL AND CO., STOCK AND SHAREDEALERS, ST. CLEMENT'S HOUSE, CLEMENT'S LANE, LONDON, E.C., TRANSACT BUSINESS IN ALL MINING STOCKS and SHARES at closest market net prices, either for cash or account.

GEORGE RICE, STOCK AND SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C. (Member of the Mining Exchange, 35 years' experience). TRANSACTS BUSINESS IN MINING SHARES, at close prices. Money advanced on mining shares.
Jan. 31, 1868. Bankers: Bank of England.

M. R. J. B. REYNOLDS, 70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C., transacts BUSINESS in Joint-Stock Banks, Railways, Mining, and all Miscellaneous Securities at the closest market quotations. Every information supplied to investors free of expense. J. B. REYNOLDS can, with confidence, recommend a few shares for investment paying 15 per cent. upon the present market price. Telegrams promptly attended to.
Jan. 31, 1868. Bankers: City Bank. Established Eleven years.

ROSE AND CHIVERTON UNITED.—FULL PARTICULARS of this very VALUABLE PROPERTY can be OBTAINED ON APPLICATION to the UNDERSIGNED, together with a MAP of the DISTRICT.
J. B. REYNOLDS
70 and 71, Bishopsgate-street Within, London, E.C., Jan. 31, 1868.

M. R. THOMAS THOMPSON, MINING OFFICES, 12, OLD JEWRY CHAMBERS, MINING, E.C.
I continue to recommend the purchase of Westminster, Ebury, East Snaefell, and Central Snaibeach shares. As will be seen by the report, there is a great improvement at Ebury. This is a cheap, and will be an early dividend mine. Cap. Northey, of Welsh Consols, has lately inspected Westminster and Ebury, and reports very favourably on both mines. He also says:—"I wish, also, to express my approval of the spirited manner in which the mine is managed, as well as the anxiety displayed by the agents in favour of the company's interest." The improvement continues at Central Snaibeach, and those shareholders who have not sent in their application for their quota of the new shares should do so at once.

M. R. JOHN WM. HUTCHINSON, 31, THROGMORTON STREET, CITY, E.C., has instructions to SELL the undermentioned SHARES FOR CASH, net:—
25 Anglo-Brazilian, 10s 10 E Russell, 25s (call pd. 10 E. Carn Brea, £2 2s 9d
25 Gt. Treskerby, 31s 3d 25 Drake Walls, 8s. 9d. 20 Wh. Grenville, 32s 6d
25 East Grenville, £2 3/4 5 Clifford, £5 18s. 9d. 10 Wheel Uny, 29s.
25 East Lovell, £3 6s. 6d. 5 Chiverton Moor, £2 1/2 20 Gt. Retallack, £2 19 6
25 Frontino, 18s. 6d. 15 North Crofty, £3 3s 9d 10 Chontales, £2 7/8
SHARES WANTED.—Sellers state lowest cash price and number:—Seton, Mary Ann, West Frances, East Caradon, and Trelawny.
Communications by post or telegrams punctually attended to.
A daily price list on application.

JOHN RISLEY, STOCK AND SHAREBROKER (SWORN BROKER), 48, THREADNEEDLE STREET, LONDON, E.C.
SPECIAL ARRANGEMENTS as to commission on large transactions. Agents' reports from Grenville, Retallack, Prince of Wales, and other mines forwarded to clients on the same day as received in London.

MESSRS. J. TAYLOR AND CO., FINANCIAL, MINING, AND GENERAL AGENTS, 17, CROSS STREET, MANCHESTER.
have the following SHARES FOR SALE:—
100 Great Mona (second issue), 50 West St. Ives. 10 East Snaefell.

M. R. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 13 years), has FOR SALE the FOLLOWING SHARES, at net prices:—
25 Anglo-Brazilian, 11s. 6d. 2 Carn Brea, £24. 20 Chontales, 1/4 dis.
10 Chiverton Moor, £13 10 Clifford, £5 16s. 3d. 25 Herodsfoot, £38 1/2
10 Carn Brea, £2 1/2 10 East Caradon, £2 1/2 20 East Grenville, £2 1/2
10 East Lovell, £3 6s. 6d. 20 East Russell, 24s. 20 Frontino, 19s.
10 Great Lacey, £18 1/2 10 Gt. No. Downs, £4 6 3 5 Gt. Wh. Vor, £20 1/2
20 Gt. Retallack, £2 18 9 20 Gt. So. Tolgus, 19s. 10 Marko Valley, £6 8 9
20 Gt. Treskerby, 32s 6d 15 N. Crofty, £3 3s. 9d. 50 W. Pr. of Wales, £2s. 3d.
10 So. Condurrow, 10s 9d 5 St. John del Rey, £3 1/2 5 W. Maria & For., 14s 3d
10 West Chiverton, £6 7 1/2 50 W. Drake Walls, 8s 3d 20 Wheel Uny, 30s. 6d
10 Gt. Grenville, £2 1/4 50 Carn Camborne, 4s 9d 5 Summer Hill, £1 1/2
10 D. Pedro, £2 16s. 3d 50 Prosper United, 37s 6d 25 Calbeck Fells, 10s.
2 Duffie, £14s. 20 East Rosewarne, 8s 3d 15 Gt. So. Chiv., 13s. 9d.
20 Newarne Un., 9s 9d

M. R. GEORGE BUDGE, STOCK AND SHAREDEALER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 15 years), has FOR SALE at net prices:—5 Maes-y-Safn, £28 1/2; 100 West Drake Walls; 25 Great North Lacey, 17s. 6d.; 5 Rose and Chiverton; 10 Gt. Crofty; 75 Gwydyr Park, 4s.; 100 Anglo-Brazilian, 11s. 6d.; 50 Don Pedro; 100 South Grenville; 40 Wheel Crebor, 7s.; 2 Minera; 10 Great North Downs, 6s. 11s.; 20 East Rosewarne, 11s.; 40 Camborne Vean; 5 Marko Valley, £6 1/2; 20 Wheel Uny, 29s.; 10 North Retallack; 50 Port Phillip; 25 South Condurrow; 65 Penden, 8s.; 25 United Mexican; 20 Linares; 60 Sparrow, 19s. 6d.; 1 Wheel Basse; 25 Okel Tor, 21s.; 40 Frank Mills; 100 Bottle Hill; 50 East Bottle Hill, 6s. 6d.

ANNUAL REVIEW OF CORNISH AND DEVON MINES FOR 1867.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST," of yesterday, January 31, 1868, No. 464, price 6d. each copy, forwarded on application, contains the continuation of his ANNUAL REVIEW of Cornish and Devon Mines, with important remarks on the PAST, PRESENT, and FUTURE of nearly all the leading Dividend and Progressive Tin, Copper, and Lead Mines, pointing out those mines most desirable to speculate or invest in at the present low price of shares.

CORNWALL AND DEVON MINES.—FOREIGN GOLD MINES, &c.
PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, Jan. 31, No. 464, Vol. X., price 6d. each copy, forwarded on application, contains information on the following mines:—
North Wheal Crofty. West Wheal Frances. Prosper United.
West Great Work. East Wheal Basset. Australian United Gold.
East Wheal Lovell. Prince of Wales. St. John del Rey.
Great Wheal Vor. Carn Brea Mines. Don Pedro.
New Wheal Lovell. West Basset. Chontales.
Wheal Seton. West Great Work. Frontino and Bolivia.

Remarks on the Cost-book system, &c., &c.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

THE LONDON DAILY RECORD—STOCK AND SHARE LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, £1 1s.; by post, £2 5s.; monthly subscription—by post, 4s.; single copy, 6d.; by post, 2d.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to bona fide investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.
PETER WATSON, STOCK AND SHAREDEALER, 79, OLD BROAD STREET, LONDON.
(three doors only from Hercules-passage, entrance to the Stock Exchange).
Twenty-three years' experience.
(Two in Cornwall and Twenty-one in London.)
Bankers: The Alliance Bank, and the Union Bank of London.

References given and required (when necessary) in all the principal towns of the United Kingdom.

M. R. EDWARD COOKE, STOCK AND SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C.
Orders for all kinds of Stock Exchange securities, either by letter or telegraph, promptly attended to.
Mr. COOKE is a BUYER of any number of West Drake Walls and New Lovell at market prices.
N.B.—A Daily Price List on application.
Satisfactory references given in any town in the United Kingdom.
Bankers: Alliance Bank.

M. R. W. H. CUELLO
(late of the firm of WATSON and CUELLO),
Has REMOVED TO 42, CORNHILL, LONDON, E.C.

ESTABLISHED FOURTEEN YEARS.
MESSRS. WARD AND JACKMAN, SHAREDEALERS,
CUSHION COURT, OLD BROAD STREET, CITY, E.C.
Members of the Mining Exchange, London.
Closing prices, Friday Evening, January 31:—
Carn Brea, £24 to £26. Prince of Wales, 61s to 63s
Chontales, 4 1/2 to 4 3/4. South Condurrow, 10s to 12s 6d
Chiverton Moor, 5 1/2 to 6 1/4. South Wh. Frances, £24 1/2 to £25 1/2
Clifford Amalgamated, 2 1/2 to 3. St. John del Rey, 35 to 38
Don Pedro, 2 1/2 to 2 3/4. Tincroft, 13 1/2 to 14
East Basset, 9 1/2 to 10 1/2. West Basset, 2 1/2 to 2 3/4
East Caradon, 4 1/2 to 5. West Chiverton, 67 to 68
East Carn Brea, 2 to 2 1/4. West Drake Walls, 8s to 10s
East Grenville, 2 to 2 1/4. West Great Work, 3 1/2 to 3 3/4
East Lovell, 8 to 8 1/2. West Prince of Wales, 9s 6d to 10s 6d
East Wheel Russell, 22s 6d to 25s. West Wheal Frances, 35 to 40
Frontino and Bolivia, 17s to 19s. West Wheal Seton, 190 to 200
Great Lacey, 18 to 19. Wheal Agar, 30s to 35s
Great North Downs, 4 to 4 1/2. Wheal Buller, 15 1/2 to 16 1/2
Great Retallack, 2 1/2 to 3. Wh. Emily Henrietta, 12 1/2 to 15
Great Wheal Vor, 20 to 21. Wheal Grenville, 31s to 33s
Herodsfoot, 37 1/2 to 40. Wheal Mary Ann, 20 to 21
Marko Valley, 6 1/2 to 6 3/4. Wheal Seton, 85 to 90
North Treskerby, 30s to 32s 6d. Wheal Trelawny, 7 to 8
North Wheal Crofty, 3 to 3 1/2. Wheal Uny, 27s 6d to 29s
Wheal Seton, 18 to 20. Wheal Uny, 27s 6d to 29s
Messrs. WARD AND JACKMAN are DEALERS in all the above at close dealing prices, and refer to their remarks on page 84, respecting those mines in the above list marked *.
Jan. 31. Bankers: London and Westminster, Lothbury.

M. R. EDWARD BREWIS, PALMERSTON BUILDINGS, 34, OLD BROAD STREET, LONDON, E.C., has FOR SALE, free of commission:—25 Prince of Wales, 3/4; 20 North Treskerby, 1 1/2; 70 Wheal Emily (silver), 2; 35 Chontales, 4 1/2; 15 East Carn Brea, 2 1/2; 5 Great Rosemar (fully paid); 50 Frontino and Bolivia, 18s.; 10 Rosewarne United (4 1/2 paid), 5s.; 2 Wheal Buller, 17; 40 North Crofty, 3 1/2; 20 Lucy Phillips; 20 Ebury, 1 1/2; 1 Wheal Seton, 8s.; 14 Summer Hill (lead), to pay 35 per cent.; 10 Westminster (fully paid), 4 1/2; 20 South Condurrow, 11s.; 6 Great Republic (Nevada) Bonds; 30 Port Phillip, 1 1/2; 10 Cefu Brynno (lead); 25 West Godolphin; and 20 Don Pedro, 2 1/2.
WANTED:—10 West Basset, for cash. Also, 20 East Providence. State lowest price.
N.B.—Many of the above shares can be subdivided, to suit the convenience of purchasers.

M. R. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, has BUSINESS in the following shares for cash or time on:—
Bedford Consols. East Carn Brea. Okel Tor.
Bedford United. Frontino. Prince of Wales.
Clifford. Gawton. South Condurrow.
Chiverton Moor. Great South Tolgus. South Grenville.
Chontales. Great North Downs. Wheal Seton.
Devon Consols. Great West Chiverton. West Caradon.
Don Pedro. Great Retallack. West Chiverton.
East Caradon. Herodsfoot. Wheal Agar.
East Lovell. Marko Valley. Wheal Grenville.
East Russell. North Crofty. East Grenville.
Rossa Grande. North Treskerby. East Grenville.

PRINCE OF WALES shares are £3, £3 1/2. Parties desirous of buying in this mine can be supplied through me for time on below the present market price; no doubt this will suit some parties.
WANTED TO BUY, any part of 1000 East Carn Brea, at market prices; 500 Bedford United; 300 Chiverton Moor; 2000 Frontino; 500 Okel Tor; 500 North Treskerby; 500 Don Pedro; 500 New Quebrada; 300 Chontales.
Money advanced on good mining shares. Office hours from 10 to 4.
Bankers: Bank of England.

INVESTMENT, LOAN, AND BANK AGENCY.
ESTABLISHED 1839.
PUBLIC SECURITIES may be divided into three classes:—
1.—THE STRICTLY SAFE, with regular dividends, and exempt from all liabilities.
2.—THE SPECULATIVE; some of great promise, others dangerous.
3.—THE BUBBLES OF THE DAY; intrinsically worthless.
At first sight it may seem easy to avoid the bad. It is not so. Meretricious appearances and fictitious dividends allure the multitude. Hence the losses sustained annually by the public are counted by millions.
Capitalists who wish to escape risks can rely upon effecting, through this Agency, good paying INVESTMENTS in the best and safest Securities upon the most advantageous terms.
FIVE PER CENT. INTEREST allowed upon DEPOSITS of all amounts withdrawable at one month's notice.
LOANS granted, for one year or any shorter period, on Stocks and Shares having a market value.
Bank and Finance Agency Business generally undertaken.
RICHARD TAYLOR AND COMPANY.
No. 12, Clement's-lane, Lombard-street, London, E.C.

M. R. CHARLES THOMAS, MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER, 3, GREAT ST. HELEN'S, LONDON, E.C.

Second Edition, price One Shilling; post-free, fourteen stamps.
M. MINING FIELDS OF THE WEST:
A PRACTICAL EXPOSITION OF THE PRINCIPAL MINES AND MINING DISTRICTS OF CORNWALL AND DEVON. Published by CHARLES THOMAS, At No. 3, Great St. Helen's, London, E.C.

MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE, LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, transact business in all kinds of securities at closest net prices for cash or account.
SPECIAL BUSINESS in Marke Valley, Great Lacey, Great North Lacey, Don Pedro, and Tia Hill. Daily price list on application.
Bankers: London and County Bank.

Established Sixteen Years.
GRANVILLE SHARP AND CO., STOCK AND SHAREDEALERS, 32, POULTRY, LONDON, E.C.

BUSINESS in the following at close market prices, net:—
Closing Prices, Friday Evening, January 31.
West Chiverton, £67 1/2 to £68 1/2. Wheal Seton, £28 to £29
Maes-y-Safn, 28 to 29. South Frances, 25 to 26
Wheal Mary Ann, 20 to 21. West Wheal Seton, 192 1/2 to 195
East Chiverton, 1 to 1 1/4. Chiverton Moor, 6 to 6 1/4
East Lovell, 8 1/2 to 8 3/4. Great Retallack, 23 1/2 to 24
Devon Great Consols, 430 to 440. South Caradon, 410 to 420
SHARES FOR SALE:—20 Killy (St. Agnes), £2 per share net cash.
Bankers: London and Westminster, Lothbury.

SHARP'S GUIDE TO INVESTORS.—SHARP'S GUIDE TO TRUSTEES.
SHARP'S GUIDE TO SHAREHOLDERS.
Dividends 10 to 20 per cent. per annum on present outlay.
For reliable information and safe investments, paying good dividends, Consult SHARP'S INVESTMENT CIRCULAR, GRANVILLE SHARP and Co., Stock and Sharedealers, 32, Poultry, London, E.C. Circular, 6d. per copy; annual subscription, 5s. [Established 1852.]

MATTHEW GREENE, STOCK AND SHAREDEALER, ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.
Mr. MATTHEW GREENE recommends for immediate purchase Tamar Valley Silver-Lead shares—certain for a rise.
Mr. MATTHEW GREENE confidently asserts that no such chance is at present to be had as the shares in this mine.
Bankers: Metropolitan Bank, London.
Tweedy, Williams, and Co., Redruth, Cornwall.

M. R. HENRY MANSELL, STOCK AND SHAREDEALER, No. 44, THREADNEEDLE STREET, LONDON, E.C.
Member of the Mining Exchange.
Bankers: London Joint-Stock Bank.

M. R. G. D. SANDY, STOCK AND SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C., TRANSACTS BUSINESS IN EVERY DESCRIPTION OF STOCK EXCHANGE SECURITIES, MINING AND FINANCIAL ENTERPRISES, at close market prices.
Mr. SANDY has just returned from inspecting Tamar Valley Mine, and will be happy to give every particular concerning this promising undertaking.
Correct Daily Price List can be had on application.
Money advanced to any amount on legitimate stocks and shares.
References exchanged.

M. R. EMANUEL BEAZLEY begs to notify that he will CONTINUE the BUSINESS of STOCK AND SHAREDEALER, as lately carried on under the name of Messrs. J. D. GINN and CO.
Orders promptly executed by post or telegraph.
A daily list of Closing Prices will be forwarded on application.
Mr. BEAZLEY recommends the immediate purchase of Clifford, Prince of Wales, Seton, New Lovell, Lovell Consols, West Caradon, and Redmoor. Information respecting these and several other mines may be had on application.
Member of the Mining Exchange.

BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS, 2, BUCKLESBURY, LONDON, E.C.
LOVELL Consols.—We are pleased to inform our clients that the lode in the shaft still improves. The manager, under date of the 23rd inst., advises us that the lode is now 127 per fathom, and rapidly improving. The shares, at present prices, are the cheapest investment that we can call attention to, and an interest should be secured at once.
Bankers: London and Westminster Bank.

JAMES SCOTT AND CO., STOCK AND SHAREDEALERS, 1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.
Mine Shares and all Stock Exchange securities dealt in at close market prices for cash or the bi-monthly settlement. References given.
J. SCOTT and Co. are BUYERS at market prices of any number of North Treskerby, East Carn Brea, and West Drake Walls, and have SPECIAL BUSINESS in Wheal Emily (Silver), Chontales, Don Pedro, and Frontino.

M. R. JAMES HUME, 74, OLD BROAD STREET, TRANSACTS BUSINESS between BUYER and SELLER, at a margin of 1 1/4 per cent.
A BUYER and SELLER of Wheal Uny, Prince of Wales, East Carn Brea, North Treskerby, Seton, East Lovell, Lovell Consols, East Caradon, Marko Valley, East Providence, Grenville, East Grenville, Drake Walls, North Downs, Great North Downs, Great Retallack, Chiverton Moor, East Chiverton, North Jane, Wheal Jane, and all other mine shares.
Bankers: The London Joint-Stock Bank.

CHONTALES GOLD COMPANY.—FULL PARTICULARS of the DIFFERENT CLASSES of SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austin Friars, E.C.

M. R. E. J. BARTLETT, STOCK AND SHAREDEALER, 30, GREAT ST. HELEN'S, E.C.

ROBERT LIBBY AND SON, MINE AND SHAREDEALERS, &c., CAMBORNE, CORNWALL.

MESSRS. POWELL AND MOSS, SHAREDEALERS, 78, OLD BROAD STREET, LONDON, E.C., and Mining Exchange, have large transactions in Prince of Wales, North Treskerby, Frontino, North Crofty, Chiverton, Chiverton Moor, and West Chiverton. Parties dealt with at a fair margin on the market price.
References exchanged.
Bankers: City Bank, Finch Lane.

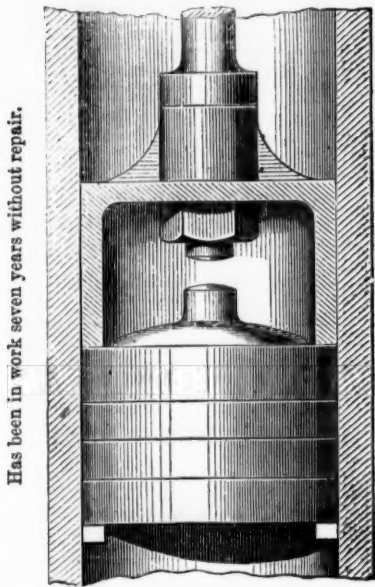
WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C., DEALS in ALL bona fide MINE SHARES, either for immediate cash or the fortnightly account, at fair market prices.
Has BUSINESS in the following:—
Don Pedro Gold. Chiverton Moor. Westminster (Limited).
Anglo-Brazilian Gold. Carn Brea. Bryn Gwlog.
Port Phillip Gold. Great Vor. Wheal Rose.
Frontino and Bolivia. West Tolgus. South Crofty.
Gold. West Frances. Camborne Vean.
Rossa Grande Gold. Wheal Trelawny. Ding Dong.
WESTMINSTER MINING COMPANY (LIMITED).—W. T. has special business in the shares of this company, and special means for information on this and other mines in North Wales.

M. R. JAMES STOCKER, PALMERSTON BUILDINGS, OLD BROAD STREET, and MINING EXCHANGE, LONDON, E.C., STOCK AND SHAREDEALER in all kinds of Stock Exchange and Mining Securities.
Established Twenty Years.
Money promptly advanced on shares.
Bankers: London and Westminster, Lothbury.

MATHER AND PLATT

MILLWRIGHTS, ENGINEERS, AND MACHINE MAKERS,

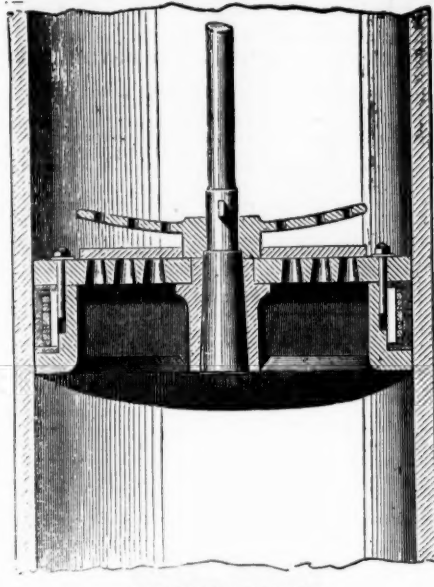
SALFORD IRON WORKS, MANCHESTER.



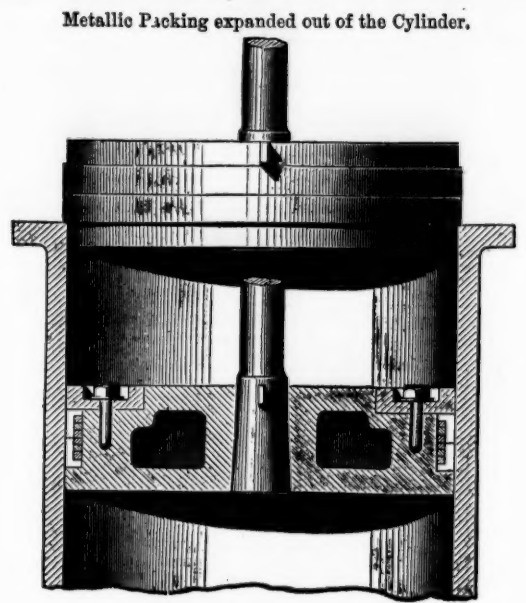
Has been in work seven years without repair.

Lift 348 feet.

COLD WATER PUMP FOR DEEP LIFTS.



AIR-PUMP BUCKET.



Metallic Packing expanded out of the Cylinder.

PISTON IN THE CYLINDER.

MATHER and PLATT beg to call the attention of ENGINEERS and USERS of STEAM POWER to their PATENT PISTONS, AIR PUMP BUCKETS, and COLD WATER PUMPS. The estimation in which these Pistons, &c., are held is shown by the fact that 4760 have been made, as well as by the following Testimonials from gentlemen whose large experience and extensive practice enable them to judge of their qualifications:—

"GENTLEMEN,—During the last 19 years, commencing in 1848, I have put in upwards of 33 of your patent metallic pistons and pump-buckets, into 49 engines and 20 pumps, under my care at the Bridgewater Trustees' Collieries. I can bear testimony to the very efficient and economical working of the same, and feel confident that with ordinary care they will give general satisfaction, wherever brought into use, possessing, as they do, many practical advantages over other pistons and buckets, being simple, durable, and effective. I have one piston (No. 671) which has been working daily for more than 15 years, one (No. 1586) 10 years, and one (No. 2246) over 7 years, without cost of repairs or trouble of any kind, except occasional cleaning. The smooth and highly polished condition of the cylinders during this length of time convinces me that the action of the metallic packing is so equable and perfect as to render the piston steam-tight and self-adjusting, without producing any appreciable friction. I have had two of your patent metallic pump-buckets working daily for over seven years, one lifting 300 feet, and one 348 feet, and both are yet performing good duty. I am now putting in one of 10 inches diameter patent buckets, to work 10 strokes, of 8 feet 4 inches per minute, under a pressure of 12 atmospheres, and feel confident of success, thus showing the superiority over other buckets, more especially where long lifts and simplicity are required. I herewith hand you an order for a 53-inch diameter piston and rod complete, also air-pump bucket, 26½ inches diameter, and rod complete. Hoping you will forward the same to these collieries as early as practicable,

"Messrs. Mather and Platt, Salford Ironworks, Manchester."

"Bridgewater Collieries, Walkden, Bolton-le-Moors, October 26, 1867.

"I remain, Gentlemen, yours very respectfully,

"JESSE TIMMINS, Colliery Engineer.

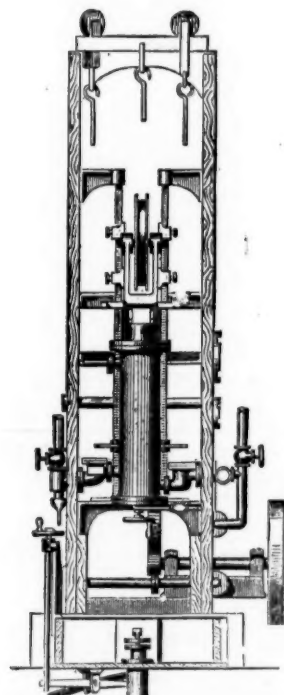
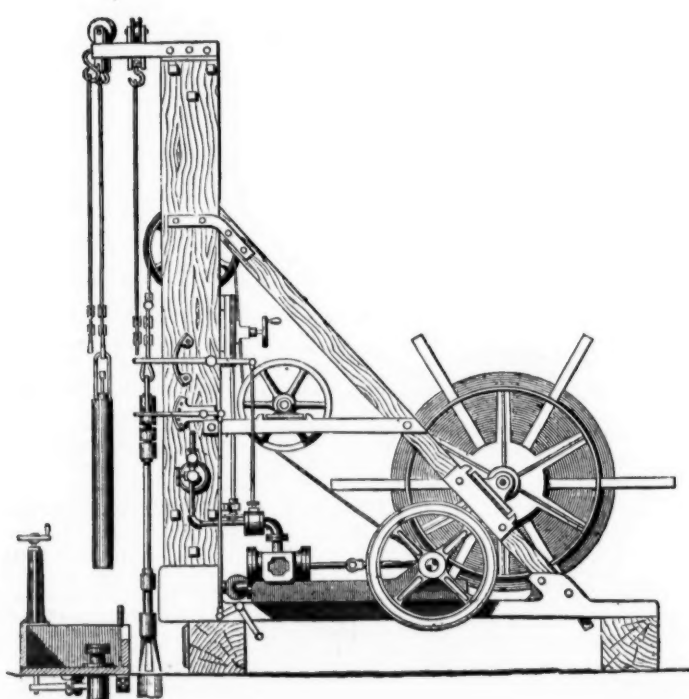
"Frampton Cottrell, near Bristol, October 31, 1867.

"GENTLEMEN,—I have ordered direct, or included in specifications of engines which I have prepared, upwards of 100 of your pistons and buckets, between the years 1850 and 1867, and I feel convinced they are the best pistons that have come under my notice, and if any proof was wanting as to my opinion of them, it may be found in the fact of my ordering the last 70 inch piston from you for our present works.

"Messrs. Mather and Platt, Salford Ironworks, Manchester."

"I remain, Gentlemen, yours truly,

"WILLIAM BAILEY.



Improved Patent Earth Boring Machines.

A considerable number of these Machines has been in most successful operation for some years in exploring for minerals and coal and the boring of Artesian wells, for supplying many towns, manufactories, &c., with water. Upwards of 50 bore-holes, from 6 in. to 24 in. diameter, representing in all 20,000 ft. of boring, have been sunk in various parts of the world, through rocks of every form and degree of hardness, from the New Red Sandstone to the Igneous formations, as well as Chalk and the London Clay.

The Machine is worked entirely by steam-power, requiring a small boiler, from 6 to 12 horse power, according to diameter of the bore-holes. The framing is made of wood, to render the Machine of easy transport.

The rate of boring is not appreciably decreased as the depth increases, as a flat rope is used in place of rods in the old system.

M. and P. beg to call attention to their Revised List of Prices of VALVES, TAPS, &c. They also request the notice of Water Companies and Hydraulic Engineers to their IMPROVED SLUICE VALVES for Water. The slides have Gun-metal Facings, are of Wedge form, and when screwed down are tight on both sides:—

GUN METAL TAPS.			CAST IRON STEAM VALVES, WITH GUN METAL VALVES AND SEATINGS.			CAST IRON SLUICE VALVES, WITH GUN METAL FACINGS.		
Bore. Inches.	Price. £ s. d.		Bore. Inches.	Price. £ s. d.		Bore. Inches.	Price. £ s. d.	
1/2	0 4 0		2	1 2 6		2	1 10 0	
3/4	0 4 6		3	1 17 6		3	2 5 0	
1	0 6 0		4	2 15 0		4	3 0 0	
1 1/4	0 8 6		5	3 15 0		5	3 16 0	
1 1/2	0 11 0		6	4 17 0		6	4 14 0	
1 3/4	0 14 0		7	6 0 0		7	5 14 0	
2	0 18 0		8	7 5 0		8	6 16 0	
	1 2 6		9	8 15 0		9	8 0 0	
			10	10 10 0		10	9 6 0	
			11	12 5 0		11	10 14 0	
			12	14 0 0		12	12 4 0	

The attention of those interested in Metallic Mining is called also to an

IMPROVED BUDDLE, OR ORE WASHING MACHINE

Which they believe will be found of great benefit

TERMS AND PARTICULARS CAN BE HAD ON APPLICATION.

New Penrose and Unity Silver-Lead MINES (LIMITED),

IN THE PARISH OF SITHNEY, NEAR THE HARBOUR OF PORTHLEVEN, CORNWALL.

CAPITAL £9000, IN 3000 SHARES OF £3 EACH

(WITH POWER TO INCREASE).

Of which £1 per share will be payable fourteen days after the first general meeting, to be convened as soon as 2000 shares have been applied for; and a further sum of £1 per share will be payable three months after the said meeting. Due notice of not less than three months will be given for the remaining £1 per share, should that sum or any portion of it be required. Thus the liability on each share is confined to £3 only.

DIRECTORS (PRO TEM.)

GEORGE C. HOCKIN, Esq., Director of the Anglo-Mexican Mint Company, Finsbury-place South, London.

WILLIAM HARVEY, Esq. (Harvey and Co.), Hayle.

JOHN W. LUKIS, Esq., Woodlands, Isleworth.

Two additional directors to be appointed at the above-named meeting of shareholders.

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SOLICITOR—J. RICHARDSON, Esq., 15, George-street, Mansion House.

SECRETARY—WM. WARD, Esq.

OFFICES,—95, BISHOPSGATE STREET WITHIN, LONDON.

These mines are situated in one of the best known silver-lead producing districts of Cornwall. Mr. John Hunt, for many years director and principal proprietor of the Pont Pen Lead Works, in France, obtained a sett from J. J. Rogers, Esq., for the purpose of recovering the ores in the surface refuse on the Penrose and Unity Mines, and working the lodes above the adit level. In the course of his explorations three important lodes have been discovered; one nearly parallel to the old workings, and distant 4 fms. from them; and the two others crossing the old lode at angles of about 64°. One of the latter is about 26 fms., and the other about 126 fms., north of the flat-rod shaft. [The full prospectus, which can be obtained of Mr. WARD, contains the reports of Captains James, Curtis, Foote, Lanyon, and extracts from the *Mining Journal* of October 1st, 1864, relative to the excursion made by the "Miners' Association of Cornwall and Devon" to the Penrose Mines].

The facilities afforded by the former operations for developing these new lodes, as well as the old ones, are most important, the shafts being sunk and levels driven, so that almost immediate access may be had to the newly-discovered portions, which were unknown during the previous working of the mine (with the exception of a short drive on one lode, which produced lead ore about 100 fms. west on the sea beach), and the results of recent workings at the adit level (below which, except for a few feet, the present lessee is unable to work on account of the water) leaves no room for doubt that, as soon as the water is drained, tributaries may be put to work at various points to raise ore at a considerable advantage. It is to be observed that the improved modes of dressing lead ores will enable much of the produce to be sold at a profit, whereas it was formerly valueless.

The low price at which an engine and the requisite materials may be obtained at this period will most materially lessen the expense of opening the mines.

With these advantages, an outlay of about from three to four thousand pounds is estimated to be sufficient, not only to make available the produce of the new lodes alluded to, but also to work the old lode in its extensive unexplored parts.

As soon as the mine is opened there can be but little doubt that the property will not only be very considerably enhanced in value, but in all probability it will become lasting and highly productive mines; in fact, such a chance of great success with a comparatively small capital can rarely be found.

The extent of the sett is considerable, and the dues (1-20th) very moderate. The lease is for 21 years, from December 1, 1863. Mr. Hunt, the present lessee, estimates that in clearing up shafts, driving and clearing levels (which led to the discovery of the above-mentioned new lodes), erecting dressing machinery, and doing other work up to the present time, he has incurred a cost of about £5,000, and he has dressed and sold ores from the mines to the value of £3438 7s. 10d., leaving a balance against him of £1561 12s. 2d.; and Mr. Hunt has agreed to transfer the lease and plant to the company (an inventory of the latter is in the hands of the secretary) for 300 shares fully paid-up and £500 in cash, being confident that the results of a proper prosecution of the mines will amply remunerate him for the balance not claimed by this arrangement.

The carriage of materials used on the mine and the expense of carting the ore to the harbour is only about 6d. per ton, which is a most important item of expense in many mines.

In addition to the reports published, the opinions of other practical men may be known, and specimens and plans of the mines seen at the office, where application for shares must be made.

FORM OF APPLICATION.

To WILLIAM WARD, Esq., 95, Bishopsgate-street Within, London.

SIR,—I request you to allot me shares in the New Penrose and Unity Mines, and I engage to take the same or any portion thereof you may allot me, and pay the calls thereon, agreeable to the terms of the prospectus.

Signed

Address

Sonora Silver Mining Company (LIMITED).

Registered under the Companies Acts, 1862 and 1867.

CAPITAL £100,000, IN 40,000 SHARES OF £2 10s. EACH

(WITH POWER TO INCREASE).

Deposit 10s. per share on application, and 10s. on allotment.

Calls 10s. per share, at intervals of not less than three months each, from the registration of the company, with the option for any shareholder to pay up in full, receiving 5 per cent. interest on excess over calls, thereby becoming entitled to share warrants to bearer under the Companies Act, 1867.

The deposit of 10s. per share to be returned in full in the event of no allotment.

DIRECTORS.

GEORGE C. HOCKIN, Esq., Director of the Anglo-Mexican Mint Company.

R. WALLEN JONES, Esq., Director of the Rosas Grande Gold Mining Company (Limited)

Captain M. F. MAURY, LL.D., F.R.G.S., &c., Belsize Park.

CHARLES MORRIS, Esq., Chairman of the United Mexican Mining Company (Limited).

WALTER SHAIRP, Esq., Director of the Royal Copper Mines of Cobre (Limited).

SOLICITOR—J. ARTHUR MORGAN, Esq., 1, Winchester-buildings, E.C.

BANKERS—The London Bank of Mexico and South America (Limited).

" The London and County Bank and its branches.

BROKERS—Messrs. GEORGE HARRIS and SONS, 27, Change-alley, London.

" EDWARD FOX, Esq., 51, Dame-street, Dublin.

CONSULTING ENGINEER—JOHN PETHERICK, Esq., F.G.S. and M.E.

SECRETARY (PRO TEM.)—A. W. WETHERELL, Esq.

TEMPORARY OFFICES.

No. 1, WINCHESTER BUILDINGS, GREAT WINCHESTER STREET, LONDON.

ABRIDGED PROSPECTUS.

This company is formed for the purpose of purchasing two valuable estates, called "The Huruapa" and "The Almada" estates, and situate in Sonora and Chihuahua, Mexico, and which have been provisionally purchased, under the advice of Messrs. John Petherick and J. P. Clemes, the well-known mining engineers, after a thorough personal survey. It is estimated by the above engineers that these properties will produce, when efficiently developed, £40,000 nett profit per annum.

Full prospectuses and forms of application for shares, and copies of the reports, plans, &c., of the engineers, may be obtained from the brokers or secretary, at the temporary offices of the company, where may also be seen samples of the silver ores assayed by Messrs. Johnson and Matthey, and a copy of the Memorandum and Articles of Association.

TO CAPITALISTS SEEKING A FIRST-CLASS INVESTMENT

at 4 per cent. per annum, free of income tax, with a prospective increase to 47 per cent. per annum.

CAPITAL, £1,750,000, AND UPWARDS.

THE HULL DOCK COMPANY,

Incorporated by Act of Parliament, 1774.

Proprietors of the Docks at Hull, the third port in the kingdom, are now raising the remainder of the share capital authorised by recent Acts of Parliament. These shares are guaranteed to pay a dividend of 45 per cent., free of income tax, until one year after the opening of the Western Dock, and are limited to pay a maximum dividend of 47 per cent. in terms of the Company's Act of 1861. The new shares rank equally with the existing shares of the company, and there are no preference shares. The tonnage of the port is rapidly increasing, and in the year 1866 amounted to 1,345,519 tons.

The Dock Estate consists of the six docks at Hull, with large and commodious warehouses, offices, &c., adjacent to the docks, and the company possess large unimproved house and other property, which, in addition to the rates and dues payable to the company, produce upwards of £14,000 a year. The reserve and of the company available against contingencies is upwards of £65,000. In the year 1868, the North-Eastern Railway Company hold £50,000 of the share capital of the company, and the Trinity House of Hull £20,000. The Lancashire and Yorkshire Railway Company are seeking parliamentary powers in the session 1867-8 to enable them to subscribe to the shares of the Dock Company. The share capital has been raised at rates averaging under 4 1/2 per cent. The shares are 250 shares, the calls on which may be made by periodical payments extending over several years, or in one or more sums, at the option of subscribers.

Applications for shares and for detailed particulars of the financial position of the company may be made to G. W. DUMBELL, Secretary. Dock Office, Hull, November 18, 1867.

HUNT'S PATENT ORE-SEPARATOR, AND GOLD-WASHING MACHINE.

THIS MACHINE, with the latest improvements, will be found WELL WORTHY of the NOTICE of ALL CONNECTED with MINING MATTERS, both as to its effectual working and cheapness, the licence from the 1st of December being considerably reduced.

Testimonials of the highest character, and all other information, can be obtained from Mr. JOHN HUNT, Porthleven, Helston, Cornwall; or of the manufacturers, Messrs. HARVEY and CO., Hayle, Cornwall.

N.B.—A Working Model of the Machine can be seen at the South Kensington Museum for Patents.

HERBERT AULT, ENGINEER, DRAUGHTSMAN AND PATENTEE'S ASSISTANT, VALUER OF MACHINERY, IRONWORKS, RAILWAY AND COLLIERY PLANT, and other works; DESIGNER AND CONTRACTOR for every description of RAILWAY and COLLIERY PLANT, CONTRACTORS' and other LOCOMOTIVES, HOT AIR and HOT WATER APPARATUS, &c.

Preparer of models &c., for patentees, and every other assistance given upon the most moderate terms. Estimates given for taking down and erecting works and other machinery.

Applications addressed to HERBERT AULT, Netherton, near Dudley, will meet with prompt attention.

N.B.—HERBERT AULT begs to call the attention of gentlemen about to put up greenhouses or conservatories to his large assortment of designs at exceedingly low prices.

RAILWAY WAGON WORKS, BARNESLEY.

MESSRS. G. W. AND T. CRAIK

ARE PREPARED TO

SUPPLY COAL AND COKE WAGONS

OF EVERY DESCRIPTION,

Either for cash, or by preferred payments through wagon-leasing companies.

WAGONS PROMPTLY REPAIRED.

THOMAS EDINGTON AND SONS,

PHENIX IRONWORKS, GLASGOW,

MANUFACTURERS OF ALL KINDS OF GAS AND WATER PIPES, BRANCHES, BENDS, WATER-TRAPS, TANK-PLATES, VALVES, and GENERAL CASTINGS.

ALSO,

RAILWAY CHAIRS AND SLEEPERS, AND GRIFFIN'S PATENT PERMANENT WAY.

LONDON OFFICE,—63, OLD BROAD STREET.

THE BEVERLEY IRON AND WAGON COMPANY

(LIMITED),

MANUFACTURERS OF RAILWAY WAGONS, WHEELS AXLES, LORRIES, CARTS, WOOD WHEELS, &c., IRONWORKS, BEVERLEY, YORKSHIRE.

THE RAILWAY SPRING COMPANY (LIMITED),

DIAL WORKS, WEST BROMWICH,

MANUFACTURERS OF

RAILWAY, WAGON, AND CARRIAGE SPRINGS.

Orders executed with the utmost dispatch, of first-rate quality, and on moderate terms.

BAGILLT OIL COMPANY (LIMITED),

FLINT.

MANUFACTURERS OF BLACK GREASE FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., £5 PER TON TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).

LUBRICATING OIL, 1s. PER GALLON (Casks free).

WROUGHT-IRON TANKS, CISTERNS, GIRDERS,

FUNNELS, &c., Plain or Galvanised.

CATTLE TROUGHES, IRON CART BODIES, &c., GALVANISED

OR LEAD SERVICE PIPE, BRASS BALL VALVES, &c.

Merchants and Shippers supplied at the usual discount.

HENRY WATSON AND CO.,

No. 60, VAUXHALL STREET, LAMBETH, LONDON

COMPRESSED FUEL

(BIRD'S PROCESS)

CAN BE MADE EVEN BY HAND-PRESS LABOUR AT THE PIT'S MOUTH, or at any WHARF or YARD where COAL or COKE DUST is obtainable.

The loss of dust by frequent transport, waste of "smalls" from falling unconsumed between the furnace-bars, or being driven up the chimney by the draught, and consequent choking up of flues, is diminished by this process.

The foreign matter in admixture being but one-half per cent. to the ton, and of a nature to ensure perfect combustion, the coal or coke treated remains unsullied. Drying is very rapid, and no artificial system needed. Gluten, cement, and all ingredients needed for mixing can be supplied in bags as required. License fee, £10; royalty, 3d. per ton.

Apply to—

JAMES BIRD,

No. 2, LAURENCE POUNTNEY HILL, CITY, LONDON.

UTILISATION OF COAL DUST AND MANUFACTURE OF ARTIFICIAL FUEL.

BARKER'S PATENTS.

THE LONDON PATENT COAL COMPANY (LIMITED) having purchased the sole rights to these patents throughout the United Kingdom, are now granting licences to coal owners and others for the use of the invention.

The process is simple and inexpensive; the cost of manufacture, including the amalgamating material, being only 2s. per ton. The fuel is without smell, and is available for all the uses of ordinary coal. It occupies 33 cubic feet of space per ton only, as against 42, the Admiralty measurement for coal. In the various tests it has undergone it has in every instance beaten similar round coal in evaporative power, weight for weight.

For particulars of these trials, and every information respecting the patents, apply to the Managing Director, or the Secretary, 26, Martin's-lane, Cannon-street, London, E.C.

TO COLLIERY PROPRIETORS AND OTHERS.

IMPROVED PATENT COAL SCREENS,

FOR SCREENING AND TIPPING COALS DIRECT FROM THE

PIT WAGON INTO RAILWAY WAGONS,

MANUFACTURED BY

JAMES MOWLE AND CO., FOUNDRY, CHESTER.

MAKERS OF STEAM-ENGINES AND BOILERS, PUMPS, and all kinds of

MACHINERY for MINES.

PIG LEAD.

MESSRS. WESTON AND COLLINGBORN SOLICIT ORDERS

for SOFT PIG LEAD, which they are producing of the very best quality

Prices on application.

WORKS,—SWINFORD, GLOUCESTERSHIRE.

OFFICE,—18, PETER STREET, BRISTOL.

DYNAMITE, OR NOBEL'S PATENT SAFETY

BLASTING POWDER,

May now be had from

MESSRS. WEBB AND CO., CARNARVON,

Sole consignees from the patentee.

This powerful BLASTING AGENT will not explode from a spark, or concussion alone, but requires the combined effect of both, and is fired by a strong percussion cap and ordinary fuse. In a compressed state it may be fired in damp holes, or under water.

Force, SEVEN TIMES that of the BEST GUNPOWDER. It will shiver to pieces cast or wrought-iron, or the toughest oak timber. No tamping is required. It is by far the safest explosive for blasting purposes ever discovered.

NITRO-GLYCERINE, OR NOBEL'S PATENT

BLASTING OIL.

THE EXPLOSIVE FORCE of this BLASTING OIL is TEN

times that of GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, and COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close ends is immense.

It will not explode from a spark or fire, but from concussion alone, and is consequently much less dangerous than gunpowder or gun-cotton.

Being heavier than water it sinks to the bottom of a wet hole, no other tamping than water being required.

One charge of this blasting oil, which is now being used with wonderful effect in all the largest slate quarries in North Wales, will displace as much slate rock as four or five charges of gunpowder; and its great force, acting on a large quantity of good slate rock, shakes and displaces it at the natural joints, or cracks, without damaging the slabs nearly so much as the more numerous blasts from any other blasting material would do.

This invaluable quarrying agent may now be obtained from Messrs. Webb and Co., Carnarvon, sole consignees from the patentee.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON AND CO., PENHALLICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE of every size and length, as exhibited in the Great Exhibition of 1861, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Carnwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS FOR SUPPLYING FUSE, upon warrant that it will prove equal to, if not better than, any to be procured elsewhere.

STRONG WIREWORK, the cross wires equally bent; also BES STAMP GRATES, both of iron and copper, and punched copper plates; DITTO TUBED. All the above promptly supplied at

W. ESCOTT'S MINING MATERIAL DEPOT,

TAIVSTOCK, DEVON.

NOTICE.—CAPT. S. M. RIDGE, of LLANIDLOES MONTGOMERYSHIRE (late manager of the Brynastir and Cwm Ffion Mines, and others, in Shropshire and Wales), is NOW OPEN to INSPECT and faithfully REPORT UPON ANY LEAD MINE in either of these localities that may be confided to his care, having had better than 30 years' experience in lead mining, as miner and agent.—Address, Capt. S. M. RIDGE, Llanidloes, Montgomeryshire.

Original Correspondence.

PROPOSED PERMANENT COLLIERY ACCIDENT FUND.

SIR,—The late deplorable accident from an explosion of fire-damp in South Wales, involving such a serious loss of life, and depriving so many families of their support, has been the means of reviving the scheme for establishing a permanent fund for the relief of the sufferers by similar catastrophes, or by those of a lesser degree. Of course, the object is to render for the future appeals to the benevolence of the public altogether unnecessary, and to ensuring to the bereaved a certain fixed income according to their necessities. How far this can be done by an Act of Parliament, compelling certain parties connected with the coal interests of the Kingdom to be taxed for the purpose, without trenching on individual rights by exceptional legislation, is not quite apparent. The object is one which is well worthy of the consideration of those interested in our coal mines, but it is very questionable whether Parliament could be induced to deal with it, seeing that already many persons who have given a good deal of attention to the subject are of opinion that permanent funds could be best administered in districts by residents, and the money obtained by the same means. The scheme alluded to is brought forward under the auspices of Mr. Vivian, M.P., and other eminent Welsh colliery proprietors, and the mode in which it is proposed to be carried out is embodied in a notice affixed to a pamphlet recently published by Mr. Nixon, on "Coal Mines," &c., as follows:—

"A committee is being formed with a view of amending the present Mines Inspection Bill. They will endeavour to get inserted a clause giving power for the levying of rates for the purpose of forming a permanent relief fund for maimed workmen, and the widows and orphans and others left destitute in consequence of accidents in coal mines. The scale proposed is as follows:—Workmen to pay one penny per pound sterling upon the wages earned; employers to pay one-tenth of a penny per ton upon all coal raised and sold; lessors the same rate. Those rates are not definitely fixed upon, and the committee would be glad to receive suggestions from those who are competent to offer sound opinions on the subject, to be addressed to Mr. J. Nixon, 117, Westbourne-terrace, Hyde-park, London."

No doubt Mr. Nixon will receive many suggestions on the subject, and not few objections, not only from lessors and lessees, but from workmen also. This, to some extent, will be apparent from the fact that at the time of the great explosions of the last year or two similar schemes were propounded and discussed, only to be abandoned. Such was the case in the early part of last year, immediately after the Oaks catastrophe, when there was a proposal for imposing a tax on the coal raised, and on the colliers' wages; but it never assumed anything like a tangible shape, the difficulties at the outset, no doubt, appearing to be insurmountable.

In the first place, it appeared that there existed societies amongst the working colliers, having for their object, amongst others, the supporting of the widows and children of such of their body as were killed by accidents, or otherwise; and also for supporting members who were permanently injured. Now, there is very little doubt but what those societies would prefer the present system of independence, and being allowed to manage their own affairs, than to be taxed for the benefit of persons with whom they were in no way connected, although it might be to their own advantage. This can, perhaps, be better illustrated by what took place with regard to the Oaks Colliery immediately after the accident. Now, nearly everyone of the persons employed there in getting coal, hurrying, &c., were members of the South Yorkshire Miners' Association, which is said to be 8000 strong, and according to the rules everyone of the widows was entitled to 5s. per week, and the children up to a certain age to 1s. per week, besides an immediate allowance of some 6l. or 8l. for burial purposes. Its receipts are about 600l. a week, and in addition to paying 50l. weekly to the widows and children of the men killed by the Oaks explosion, it expends 120l. a week to the sick and incapable, and boasts of having during the past year assisted other trades to the extent of 6000l. The obligations entered into by the association—although such a wholesale loss of life could never have been anticipated—to the credit of the executive be it said, have been fully met, and men were engaged from the day after the accident looking after the wants of the widows and children. The members, also, for years to come will be heavily taxed to keep up the necessary payments. Now, it would appear a hardship if those men, desirous to do their work in their own way, and to be free from all outward influence and control, were to be taxed against their will for the purpose of doing for other districts what they have done for their own, because the colliers of South Wales and other places, when a serious loss of life took place, had nothing to fall back upon but public charity and parochial relief. In connection with the association alluded to, as well as others belonging to the mining body, it may be said that the leaders are perfectly aware of the power of numbers, and what is likely to be detrimental or otherwise to their interests; so that, with regard to a fund raised in the way proposed, the expressed opinion of some of them may be taken as significant. One of the principal, and undoubtedly the ablest, member of the South Yorkshire Miners' Association, on the question of raising a permanent fund by compulsory means, said the colliers as a body—those in Union—would oppose any measure by which they were to be taxed unless they had a certain control over the disposal of the monies they were compelled to pay. Such being the case, the other parties who would be called upon to contribute—the lessors and the lessees—would doubtless take the same view, and desire to share in giving effect to the object they were compelled by an arbitrary Act of Parliament to contribute towards. This may be looked upon as a difficulty which has no foundation, seeing that it has not been stated how the fund is to be dispensed, or what is to be the position or qualification of the almoners.

Having so far taken the working colliers' view of the subject, it would be unfair not to notice the position of the other parties it is proposed to tax. The colliery lessee's position is not always a very pleasant one, and he often has to work under great disadvantages. For instance, in the South Derbyshire district nearly the whole of the collieries have only been very partially employed for the last eight or nine months, to the great loss of the proprietor, who, in addition to the stoppage of the works, have their houses lying idle, and are at a great expense in providing for the safety of the men they have brought from a distance. It is not, therefore, likely that there have been any profits made under the circumstances, yet they would have to accept the extra tax. We have also had strikes, such as that at Staveley in the early part of last year, where some thousands of men were out, in South Yorkshire a couple of years since, and in Lancashire at present, in all of which the masters, as well as the men, suffered. Again, it should be remembered that such colliery proprietors are rated to the poor, and, generally speaking, are not over favourably dealt with, so that they are enabled to relieve ordinary householders and shopkeepers, besides giving to the latter the benefit of their capital by the employment of labour. Such being the case, it is questionable whether in common fairness and honesty they should be burdened with a tax of an unexceptional character, to which no other class of the community is subjected, and which is, in fact, paying a poor rate for the maintenance of the body he finds work and pays wages to, and another rate for those with whom he has no connection. Why, indeed, he should be called upon to pay a double rate, more than the shipowner and others, is not apparent. It should also be considered that the loss caused by an explosion in a colliery entails enormous expense on the proprietor, which it takes years, if not a life-time, to recover. In the case of the Lund Hill explosion, in 1857, the cost of bringing that colliery into working order was said to be 23,000l., resulting in one of the proprietors being hopelessly insolvent. At the Oaks Colliery, also, where the loss of life was the greatest known in our mining history, the actual cost of clearing the workings and sinking a new shaft will, probably, not be less than 60,000l. or 70,000l.

All those matters noticed above will have to be taken into consideration in the endeavour to establish a national permanent fund. Before, however, leaving the subject it may be well to state that a permanent fund has been established for Yorkshire, where there are 30,000 miners, or more than one-tenth of the entire body in the kingdom, at the head of which are Earl Fitzwilliam, Lord Halifax, and Lord Wharfedale. A similar fund is being established at Talke, towards which the Mansion House Committee have contributed; and part of the surplus of the Hartley Fund has been set aside for the same purpose for the North of England, whilst the London committee have some 7000l. left of the money raised for the sufferers by

the Oaks and Talke explosions, which also may be looked upon as a permanent colliery fund. The question is, will the districts named desire to be extra taxed? The answer is obvious. R.

PREVENTION OF COLLIERY EXPLOSIONS.

SIR,—As a practical man and a well-wisher to both masters and underground working men, I may be permitted to make a few remarks upon this subject. I have been a practical managing mining man from my earliest childhood up to this time, and, as I was born in 1795, I have had some experience. I would let bygones be bygones, but one and all should do his best to endeavour to avoid explosions for the future. Like many practical men, I never did like a safety-lamp, nor yet any works where a naked candle was not safe. Instead of which, why not pursue the proper system to avoid such awful calamities by explosions as have happened, especially within the last 10 years? Facts are facts, and we all know that there are none more blind than those who will not see. Many honest-meaning men come to a wrong conclusion by being led by theorists instead of practical workers, yet practice and theory, hand in hand, can accomplish much, and likewise avoid much wrong. It is my opinion that many poor unfortunates who have so recently been cut off by explosion have been made to bear the blame of the living—i.e., the masters. Many poor, thoughtless, unprotected ignorants have been cruelly committed for various terms of imprisonment for incautiously exposing their naked lights, so as to cause danger, when with due and proper care such danger and great calamities could have been avoided in a very great measure, and that particularly in new works. In one of our greatest calamities, and where destruction of lives were many, several of the surviving colliers were committed to Monmouth, some for smoking and some for exposing their lights. Is it unreasonable, then, to ask what is to be said of a powerful steam-engine underground, and working alongside these poor men sent to prison for exposing their lights, when such a (prior condemned) dangerous monster ought to do its work on the surface, in the open air, as pointed out the first day it worked? Singular to say, nothing was said of this engine at the inquest, though both overmen and engineers knew of it, and, fortunately for them, the poor dead were silent.

May I ask, are overmen, engineers, and surveyors fearful of losing their situations, or how is it that—although it appeared in print when the accident was first announced that at that colliery, in the north part, they had several miles of roadways laid, and had three or four steam-engines at work underground at the time, about which not a single word at the inquest appeared—the cause of ignition could not be accounted for? Why was not a word further said respecting such engines? By keeping steam-engines to do their work in the open air (their proper place), and with limited workings properly ventilated, it would be much to the benefit of mineral masters, and afford great security to the underground working men.

Near Newent, in Gloucestershire, my father had his engine on the surface for winding coal up a dipple, at an angle of 45°, and worked wells with a frame and roller fixed at the brow of the inlet bottom of the pit. Unlimited workings form one grand mistake on the part of proprietors: I speak from experience. Their cheapest, safest, and most lucrative and lasting plan is to adopt limited workings, with proper ventilation, thus avoiding explosions, unnecessary statements, trouble and expense, and above all, securing securing safety to workmen, without the Government Inspector and other officials, which such unbounded workings require. Depend upon it it is cheaper, easier, safer, and better to confine from 100 to 200 acres or so for each pair of pits to work out, working either to a barrier or to a walled division to the next pair of pits, and to suffer no communication whatever of one pair of pits with another; but for each pair of pits to connect together alone, more particularly should fire-damp exist. I maintain it by experience that it is less dangerous and more profitable to sink pits with limited workings, than to bear the regular necessary outlay for keeping extensive roadways in repair.

About the year 1818 or 1819 a gentleman named Ryan, considered the most practical skilful man of the day for encountering fire-damp (then called wild-fire), was employed much by Lord Dudley, and most other thick coal owners in the Dudley district: he was termed the Fire King. For a length of time I was under the tuition of Mr. Ryan prior to my engagement for the management of the Carrick-on-Shannon Coal and Iron Mines, under the Letouche Company, but owing to discontent in Ireland it was discontinued. One of Mr. Ryan's plans was chambers, or top headings, for the accumulation of gas, which, by firemen kept for the purpose, was each morning ignited before the colliers went down to work. At Bumblehole Colliery, now the British Company, a report like unto thunder was most mornings to be heard when the fire-damp was being ignited by a fireman, with a wet suit of flannel, and a long rod with a light, and he would then lie down out of the way of it. At that time at a thick coal pit on the right-hand side of the road leading between Round Oak and Hawley Hall (I believe Lord Dudley's, at which fire-damp was so prevalent and dangerous that the one side was walled off with brickwork, whilst the opposite side was worked out), and on the last day of working on the exhausted side, and when the men cleared up the place, sending out all the coal making a bildas, the charter-master, named Joseph Pottey, sent a man up for their allowance, and whilst he was away he (Pottey) asked the men to make a breach in the wall, but all refused, and with an iron bar he made a breach himself; the gas in an instant ignited with a terrific explosion, by which the poor man with the drink, then going down, was met, blowing him a great distance in the air, and rising perpendicularly he returned down the pit, a sad sight. There were 16 killed, and all buried in the same grave at Dudley Church. There was one poor fellow that as soon as on the surface set off at top speed, and ran until he he dropped dead. Poor Pottey when the doctor came enquired had he been to all the others, if not, for him to go, and attend to him the last. He made one of the dead, and he was satisfied who was to blame, by his remark. Such appears the effect walling off had, and proves the due caution necessary to be taken. J. G.

ARTIFICIAL FUEL.

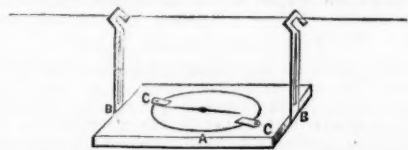
SIR,—Although so much has been written upon the desirability of utilising the small coal made in the working of collieries, it is curious to find that none of the suggestions likely to prove of practical value have been turned to account, whilst the greatest absurdities have been fortunate enough to find capitalists to give them a trial. It is an acknowledged fact that small coal can be successfully employed, by the application of inventions for the use of which the public would have to pay nothing, either in its normal state or converted into coke; and that, if converted into coke, the heat resulting from the carrying on of the coking process can be made available for the ventilation of the mine. Some ten years ago, a colliery owner in the South Yorkshire district devised a plan for coking all his small coal at the top of his up-cast shaft, the furnaces being so constructed that the whole of the return air passed around them on the way to the stack. The success obtained was complete, and that there might be no impediment to the general application of the arrangement Mr. Rogers, the inventor, took the trouble to publish ample explanations, and demanded no return whatever for the use of the invention. The coke produced was said to be of a good hard character, quite adapted for metallurgical purposes, and the pit was as perfectly ventilated as it could have been by the consumption of the same weight of coal at the bottom of the shaft, in the usual manner.

Now, the advantage of getting a sound hard coke, instead of bricks of compressed fuel, can scarcely be compared, and more particularly in such a case as the utilisation of the small coal of India. I say small coal, because as all the coal yet found there is so dirty as to require washing, it is obvious that the whole must be crushed before anything can be done with it. In connection with the Indian coal, the chief point is the separation of the impurities; and although I must admit that a modification of the jiggling machine could be very cheaply constructed, and would be very effective, but as there might frequently be some difficulty in obtaining water, one would think that some of the suggestions for air separation would be preferable. When once the coal is reduced to powder its separation from impurities is far less difficult than many suppose, and it matters little whether those impurities be lighter or heavier than the coal. The cost of an air separator would not be any greater than that of a water machine, for a wooden fan would be quite as efficient as any other, and the fan and

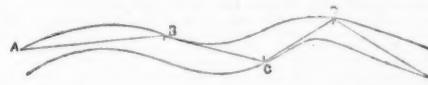
hoppers would certainly not involve a larger outlay than would be necessary to construct the wooden jiggling hutches. But does not the real difficulty of employing Indian coal on the Indian railways arise more from the difficulty of working the coal than from treating it as it has been got to the surface? Would there not be great difficulty in getting the natives to engage in coal mining, and more especially as the extent of the works increased? I fear this is the real cause of the importation of English coal being necessary. Until this question be satisfactorily answered, it would probably be well for capital to exercise caution before attempting to bring large quantities of Indian coal into the market.—Jan. 28. F. M. C.

UNDERGROUND SURVEYS.

SIR,—An instrument largely employed in Spain for mining purposes seems to be quite worth describing. It is certainly the most portable and simple one in use, where exact results are required, was invented by the French, and taken with them to Algiers, and thence called the compass of the Algerine Commission. Its figure as represented in the following sketch, and consists of an ordin-



compass, A, suspended in a parallelogram of mahogany, B.B. this is fixed two sights, B.B., on the top of which are hooks, in or that the instrument may be hung on a thread when needed. The compass is suspended in a double ring of brass, so as to hang horizontally in whatever position the parallelogram may be, but a screw underneath, to which can be attached a ball and socket joint to fit it, on the top of a tripod, if required. It is then kept firm the mahogany parallelogram by two small brass clips, C.C., screw to the wood. The method of using this instrument inside a mine to suspend a string from one side of a gallery to another as tight as possible; the dial is hung on the string, and the bearing taken. To observe the difference of level in degrees it is customary to use a semicircle of 4 or 5 inches radius, with a plummet suspended to and which has also two hooks to hang it on the string. Supp-



A B C D E to be a gallery, nails are driven in at all these points, pending a string, as tightly as possible, from one to the other. The dial is then first hung thereon, and afterwards the semicircle, thus the bearing and difference of level of each point are obtained. You, of course, measure each line, and can also take the distance from each point to the opposite side of the gallery, thus obtaining the width; also, by taking the distances from the line to the roof to the floor, you get the height of the gallery. The writer has for the following method of recording his observations convenient:—

Station.	Bearing.	Distance.	Level.	Width.	Above.	Below.
1	120R.	0'60	.....
2	27 1/2	3'64	R. 2'0	1'12L.	0'48
3	26	8'66	F. 1'0	1'15R.	0'50

The bearing is supposed to be taken from the north; the measures are metres, or yards and decimals. In the levels R means rise, and F fall; the direction of width is expressed by R right, and L left. The heights need no explanation. Similar operations can be carried out on the surface, by driving in rods or stakes sufficiently firmly to keep the string tight. I have seen a survey of this class afterwards laid down with the same instrument, used on a table from which the nails were carefully excluded, making the side of the mahogany parallelogram serve as a ruler, and placing the instrument in the exact positions it occupied in the actual survey. This method has the advantage of great simplicity.

Of course the instrument just described is only suitable for limited distances, but for all ordinary mining operations it is amply sufficient; indeed, the common system of taking a centre line with candles, where the gallery makes many turns, is more likely to lead to error; besides the dial referred to can be hung in many places where a tripod could not be introduced.

THE NORTHAMPTONSHIRE IRONSTONE.

SIR,—Frequent reference having been made in the *Mining Journal* to the ironstones of Northamptonshire, and to the probable effect its development upon the prosperity of the county, I may be permitted to make a few remarks upon the subject, which will doubtless be interesting to many of your readers. It is now nearly 20 years since it first became generally known that Northamptonshire was rich in ironstone, and the stir it caused in this district, in which I am an ironmaster of 28 years standing was really extraordinary. I can remember the effect it had upon myself and others at the time. We were then labouring under very great advantages, as we are at present time. Railways were then opening up in all directions. South Wales was making iron very cheaply; Scotland was manufacturing thousands of pig-iron annually, and converting it into bars, &c.; North Staffordshire was just beginning to give substantial evidence of its enormous mineral resources; Shropshire was making rapid strides; and Derbyshire and other minor districts were gradually opening up; whilst Yorkshire and Cleveland were, as it were, lying dormant.

At that time the Northamptonshire ironstone was considered by great many to be just what was wanted to assist us in making iron at a cheap rate, so as to enable South Staffordshire to go into the market on equal terms with our competitors. But, alas! the time had not arrived—the first attempts made in South Staffordshire to smelt it were not altogether successful, and the anticipations of the trade generally were completely upset; not because the quality of the ironstone was such as to prevent good results being obtained, but because the mode of treating the ore was not at all understood. The important material, however, was not to be allowed to go unheeded for about that time Messrs. Butlin commenced, surrounded as they were by difficulties, to make pig-iron, the first series of experiments being made at their little furnace at the East End Ironworks, Westborough.

But what was to be done with the pig-iron made was a question which often presented itself. Some tons were made—I think about 150 tons—and some of it was offered to us by that firm. The purchase of 20 tons was agreed to, but when the iron arrived at our works we refused to take it in, on account of its broken and rough appearance. Messrs. Butlin, however, had then in their employ a very old workman of ours, a puddler, whom they brought down to our works, and he prevailed upon us to receive the pigs, and asked us to allow him to work up a few heats. We consented, and the results were highly satisfactory; it worked well, and produced a fair sample of merchant bars, &c. We were so pleased with the results that we purchased all the stock they then had in hand, and by sending a few 5-ton lots to several of our friends we were enabled partially to introduce the Westborough pig-iron into the Staffordshire district. Since that time we have worked up about 13,000 tons, and we are now using it largely, with good results. Others besides ourselves are likewise using it, one firm that I know having consumed 15,000 tons, and they are still using it largely. The Northamptonshire pig-iron is also first-class for foundry purposes, and is being used for casting into hollow ware, and all the class of casting called gunmetal casting; it is, moreover, a very good iron for rolls, being very uniform, and second to none for closeness of grain and clearness of surface. We have made many samples at intervals for testing the tensile strength, such as cable bars, merchant bars, boiler-plate, hoop-iron, sheet-iron, and wire rods, and I venture to say there is not less in more useful iron in either England, Wales, or Scotland. I have not in my possession a sample of boiler-plate that stood a test of 34 tons to the square inch before it broke; the Government test is 23 tons. I have also a 1/2-inch chain that stood a test of 9 tons before it gave way, and the links are so pulled one into the other, that it appears

PETROLEUM IN STEAM SHIPS.—The Secretary of the United States Navy reports: "The Act approved April 17, 1866, appropriated \$5000 for testing the use of petroleum as a fuel for marine engines. An elaborate series of experiments has been made at the New York and Boston Navy Yards. The conclusion arrived at is, that convenience, comfort, health and safety are against the use of petroleum in steam vessels, and that the only advantage thus far shown is a not very important reduction in bulk and weight of fuel carried."

BRITISH MINES.

EAST DARREN.—Jan. 28: Taylor's Shaft: In the 116 east the lode is 6 feet wide, producing fully 2 tons of lead ore per fm. In the 104 east the lode $1\frac{1}{2}$ yard wide, improved for lead, producing $1\frac{1}{2}$ ton per fm. In the 92 east the lode is 4 feet wide, yielding $1\frac{1}{2}$ ton per fm. In the 92, west of boundary, the lode is 1 yard wide, producing stones of lead ore at times, but not to value. In the 80 east the lode is $1\frac{1}{2}$ yard wide, a little improved for lead, now yielding saving work.

GREAT WHEEL BADDERN.—R. Pryor, H. Tregoning, Jan. 25: Hill Brothers Engine-shaft: The ground in the 75 ft. level cross-cut south appears to be a little speedier for driving the last day or two, in consequence of intersecting several breast-heads from which a quantity of water is issuing, being still in

down behind the star, is worth 10¢. per fm., but the other part is convenient and speedy for sinking on. The 110 east end is worth 57. per fm. 110 west rise is worth 121. per fm. The 100 west winze is worth 121. per fm. the 90 north cross-cut, nothing of any importance intersected since last year. We sold on Thursday last 5 tons 11 cwts. 3 qrs. 20 lbs. of black tin, for 2011.75

from here, and in it I discovered tin; the first I have seen in the country. At the Boca do Aroa, situated about three miles S. W. from here, I met with a large pile of copper slag, with some fine stones of half-smelted copper intermixed; it must be the remains of an old smelting-furnace of the Spaniards, and from the situation quite independent of the Quebrada Mine and Iode. I will give it further attention if it is thought necessary. In my trip to Bargualmito I found

Lat the President (General Patina) would be very glad to assist the company by every means that lay in his power, and, with everyone else, was eagerly looking forward to the completion of the company's line to Aroa, so that the great quantities of inland produce might be sent by way of Aroa. General Patina has just purchased a large estate near the boundary of the company's property, on the road to the mines, which makes him more anxious. A good road can be easily and cheaply formed from Barquisimeto to Aroa—in fact, the Bolivia Mining Association formed a good road, for the purpose of bringing provisions, which they found they could purchase much cheaper in the Barquisimeto district. The health of the men has very much improved. I trust you will soon send an English doctor here. I have had for the last fortnight a severe dysentery, which has rendered me so weak that I find it a very difficult matter to write this report, and I am afraid if I am not better in a day or two that I shall be compelled to place myself under a doctor's care. I spoke to you about powder and safety-fuses just after I arrived; we are nearly out, and can procure none here.

[For remainder of Foreign Mines, see to-day's Supplement.]

MINING NOTABILIA

[EXTRACTS FROM OUR CORRESPONDENCE.]

NORTH WHEEL CROFTY.—A great improvement has taken place at this mine in the 183 fathom level, east of Praed's shaft. At the meeting, in December, this point was passing through the cross-course, and of no value; subsequently the lode became worth 25l.; in a short time it improved to 45l., 50l.; and now it has increased, it is said, to nearly 100l. per fathom. The other levels will now be pushed on, and of four good points of interest to come off—the 120 south, east of Rule's shaft, where the south part of Reeve's lode will, probably, be intersected; and the 196, east of Praed's shaft, which has not yet got under the rich tin ground in the level above. A winze will, probably, be sunk below the 183, to prove the value of the lode in depth.

WHITEWELL LEAD MINE.—On Thursday I attended at the sale room of Mr. H. C. Walton, of Fishergate, Preston, to see the result of sale of 10 shares in the Whitewell Lead Company, Clitheroe. By reference to the Dividend List you will find the mine in 3000 shares, with 5s. per share paid. The shares were sold to a bona fide purchaser, at 18l. 5s. per share. This augurs well for so new a company.

WEST WHEEL FRANCES.—The mining world has been startled by the discovery of a lode in the 85 west, 22 ft. wide. The value of the part driving on (9 ft. wide) has increased from 40l. to 60l., and latterly to 90l. per fathom. The 77 east is also showing good indications of improvement. This, with the 95, is being pushed on as rapidly as possible, besides which the lode at the shaft, below the 108, is worth 20l. per fathom. This splendid improvement must be very gratifying to Captain C. Thomas and those associated with him in the management, as well as to the shareholders, who have so spiritedly found capital, and placed confidence in the scientific knowledge of the agents. Other points of importance are shortly expected to come off, and it appears pretty evident that West Wheel Frances is destined to be one of the prizes of 1868. During the past quarter some 25 tons of tin were raised and sold, and from the improvements which have taken place since the meeting it is supposed the returns may be doubled, which would suffice to pay very handsome dividends upon the small number of shares into which the mine is divided.

SOUTH TREVENNA.—An important operation has been completed here, the connecting the rise in No. 2 tin lode from the 20 fm. level with the winze sunk from the adit level, which is 25 fathoms from surface, laying open hundreds of fathoms of good tin ground that can be stoped away on tribute at a cheap rate. This has given much satisfaction in the district, in consequence of the new management having only taken this piece of work in hand during this month, the former company not being able to accomplish it, but came to grief in the attempt, the present proprietors would appear to have little else to do than to erect sufficient stamping-power to return as much tin as they like.

NORTH WHEEL CROFTY.—The lode in the 183 fm. level, east of Praed's shaft (which may be considered the heart of the mine), is valued by the agents as worth fully 90l. per fathom for 6 feet in length and 6 feet in height. This is certainly a most important improvement, indeed it may truly be termed an "unexpected discovery," which will enable the company to increase their returns, and thereby wipe off the debit balance without making a call, which certain prominent dealers, though very small shareholders, strongly advocate.

TAMAR VALLEY.—The works at this mine are progressing most satisfactorily. The main shaft sinking on the course of the lode is now deep enough for commencing to drive the level south. Capt. Goldsworthy, the agent, is sanguine of meeting with a good deposit of lead at an early date.

PENHALE WHEEL VOR.—Those interested in this property have cause for congratulation in attesting the correctness of the information given by an old tributer of the district as to finding, in the 40 fm. level, a run of rich tin ground. This level has just been uncovered, and, in accordance with the statements of the old miner, two lifts, winze-tackle, and other tributers' tools have been found. He unhesitatingly states that a fine run of rich tin ground will be found when the water is in fork and the level cleared. This will be accomplished in about six weeks from the present time.

STEEPLE ASTON IRON ORE COMPANY.—The works are being pushed rapidly forward, and two of the directors are down this week arranging various matters, with a view to the permanent and profitable working of the undertaking. A large sale of ore is expected to be made immediately. The investment is evidently going to be a fortunate one for the shareholders.

EBURY.—Some splendid stones of ore from Evans's shaft may be seen at the offices of the company. The lode continues to improve, and there can be little doubt but that the shaft is now entering upon one of those permanent runs of ore which never fail in this district to make valuable and profitable mines.

CERN. BRWYN.—The 92 fm. level east still continues worth 1 ton 12 cwt. per fm. Other places look well.

Several mines in the Tavistock district are looking well. BEDFORD UNITED MINES, for one, stand prominent, and are looking well at the north shaft, and bid fair to pay dividends for years. CRELAKE can pay a dividend at the February meeting. What a great change in this mine! This is good for labour, as well as the trade of the town.

At WEST PRINCE OF WALES the operations are going on very satisfactorily, and the lode has all the appearance of the Prince of Wales, and no doubt the same results will follow.

GREAT WHEEL VOR.—The lode in the recent discovery at Edwards's shaft is getting larger. Some fine stones of tin were brought up during the week. The 204 and 194, driving east and west of Metal shaft, are producing well, and maintain their value.

NANGLE.—Prospects continue to improve. The lode in the 130 is looking better. There is more ore coming in the lode; the south part is 18 in. wide, and the north part 3½ feet wide. The quartz is getting softer, and the men have met with a vug, with rich ore all round it. In the north part of the lode they will have a rich lode in this level soon. The rise and stopes over the 120 are worth 12l. per fathom, and the lode in the 120 is improving. The ground in the 130 fm. level cross-cut has also improved for driving.

At OKEL TOR the bi-monthly samplings show a favourable progress; they have risen from about 500l. to 650l., and the next sampling the agent, in his report to day, expects will amount to 1000l., and it is contemplated that they will progressively increase from this time forth, for besides the great resources on the north lode, the south lode is now so far developed in the 50, 65, and 80 fm. levels, as to prove that an extensive course of good quality yellow ore is in existence in its various parts, chiefly found on the south or hanging wall; yet this remarkable lode, which is nearly 30 ft. wide, and chiefly composed of granulated quartz, bears large veins of copper ore on the north part, and is interspersed throughout with yellow ore in places.

ROSE AND CHIVERTON UNITED.—The accounts received from this mine are of a very cheering character. A portion of ore from the new lode has been assayed, and, although roughly dressed, proved to be worth 19l. per ton. The frost has interfered with the samplings, the next of which will, however, take place in February. The development of this property is being watched with great interest in the neighbourhood.

[ADVERTISEMENT.]—The operations at WESTMINSTER are being carried on with the greatest vigour, and everything being done to make this a permanent dividend property.

EBURY.—The lode in the shaft continues to improve, and this mine may now be looked upon as a certainty.

[Full particulars of the meeting at CENTRAL SNAILBEACH will appear in next week's Journal.]

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for Dec. is 23. They have consumed 1436 tons of coal, and lifted 10½ million tons of water 10 fms. high. The average duty of the whole is, therefore, 49,500 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Cargill Mines—Mitchell's 72 in.	Millions	49.9
Chiverton Moor—70 in.		60.1
Cook's Kitchen—50 in.		51.3
Dolcoath—Harriett's 60 in.		52.2
Great North Downs—Sleggan's 70 in.		52.0
North Wheel Crofty—Trevenson's 80 in.		52.2
West Caradon—Elliot's 50 in.		55.4
Providence Mines—40 in.		53.3
South Wheel Frances—Marriott's 75 in.		57.7
West Wheel Seton—Harvey's 85 in.		71.9
Wheel Seton—Tilly's 70 in.		61.8

MINING IN EASTERN NEVADA.—The news from this district continues to be very encouraging. The Diana Mine, on Lander Hill, has improved 32½ tons, and the assay of the pulp gave \$271 per ton: one parcel gave \$344 per ton. The Magnolia Mine is producing superior sulphur; 35 tons yielded four bars of bullion, worth \$4297. In two weeks ending Dec. 3 the North Star Mine returned 46,500 ozs. of bullion. The Old Dominion Company's mill has made its first return, of 6000 ozs. of bullion. The Savage Mining Company president's report shows the gross product during the year of the enormous sum of \$3,000,000 in bullion, and dividends to the amount of \$1400 per foot. In the twelve months the mine has returned a clear profit of \$1,120,000 in specie to its owners, leaving a balance of \$149,201 in the treasury. The gross product of the mine up to the 10th of July last was \$6,513,578. The dividends for the past year have been equal to an interest of 10 per cent. on a par value of \$14,000 per foot, or share, of the mine. The new and peculiar mineral of silver, which was first observed several months ago, and named Stetefeldite in honour of the discoverer, has also been discovered in the eastern section of California. It was first observed in the Empire district, and subsequently in the districts of Silver Bend, Northumberland, Hot Creek, Columbus, and Volcano, and quite lately in the Cortez district. It appears to be the chief bearer of silver in all the districts lying in the south-eastern section of this State. It has also been discovered in the Blue Spring district, Mono county, California.

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Mr. Warrington Smyth's Lectures, XXIII. to XXVI.—Geological Society of London—Manchester Geological Society—Report of meeting of Association of Mine Agents of South Staffordshire and East Worcestershire—the Mineral Resources of Turkey—Foreign Mining and Metallurgy—Meetings of Public Companies:—the National Bank, the Ebury Lead Mining Company, the Royal Copper Mines of Cobre, the Lucy Phillips Company, the Vancouver Coal Company—Foreign Mine Reports—Mr. W. H. Cuell's Annual Statistics of the Mining Interest, &c.

With last week's Journal a SUPPLEMENT SHEET was given, which contains the Title Page and Index to the Volume for 1867. Also, Mr. Warrington Smyth's Lectures, delivered at the Royal School of Mines, Nos. 20, 21, 22—Peat Fuel and its Manufacture—Silver Smelting in Colorado—California Mining Machinery for Nicaragua—Cast-Iron Water-Pipes for Abyssinia.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JANUARY 31, 1868.

COPPER.				IRON.				Per ton.
Best selected, p. ton	75	0	0	Bars Welsh, in London	6	10	0	—
Tough cake and tin	73	10	0	Ditto, to arrive	6	10	0	—
Sheathing & sheets	77	0	0	Nail rods	7	0	0	7-10 0
Boils	83	0	0	Staff, in London	7	10	0	8-10 0
Bottoms	85	0	0	Bars ditto	7	10	0	9-10 0
Old (Exchange)	66	0	0	Hoops ditto	8	10	0	9-12 6
Burra Burra	82	0	0	Sheets, single	9	5	0	10-0 0
Wire	10	0	0	Pig No. 1, in Wales	3	15	0	4-5 0
Tubes	0	11	0	Reheated metal, ditto	4	0	0	5-0 0
BRASS.				Bars, common ditto	5	15	0	6-0 0
Per lb.	9d.			Do. mch. Tyne or Tees	6	10	0	—
Sheets	9d.-10d.			Do., railway, in Wales	5	0	0	5-10 0
Wire	8½d.-9½d.			Do., Swed. in London	5	0	0	10-10 0
Tubes	10½d.-11d.			To arrive	5	0	0	10-10 0
Yellow Metal Sheath. p. lb.	7½d.-—			Pig No. 1, in Clyde	2	12	3	2-17 6
Sheets	6½d.-—			Do. f.o.b. Tyne or Tees	2	9	6	—
SPELTER.				Do. Nos. 3, 4, f.o.b. do.	2	6	2	7 0
Per ton.				Railway chairs	5	10	0	5-15 0
Foreign on the spot, £20	5	0	—	" spikes	11	0	0	12-0 0
" to arrive	20	5	0	Indian Charcoal Pigs,				
ZINC.				In London p. ton.	7	0	0	7-10 0
In sheets	£26	0	0	STEEL.				
TIN.				Per ton.				
English blocks	96	0	0	Swed., in kegs (rolled)	14	5	0	—
Do., bars (in barrels)	97	0	0	" (hammered)	15	5	0	15-10 0
Do., refined	99	0	0	Ditto, in faggots	16	0	0	—
Banca	90	0	0	English, spring	17	0	0	23-0 0
Stralts.	£87	0	0	QUICKSILVER (p. bottle)				
TIN-PLATES.*				Per box.	6	17	0	—
Per box.				LEAD.				
IC Charcoal, 1st qua.	1	6	0	English Pig, com.	19	0	0	19-5 0
IX Ditto, 1st quality	1	12	0	Ditto, L.B.	19	10	0	—
IX Ditto, 2d quality	1	0	0	Ditto, W.B.	21	0	0	—
IX Ditto, 2d quality	1	10	0	Ditto, sheet	30	0	0	20-5 0
IX Coke	1	6	1	Ditto, red lead	20	15	0	—
IX Ditto	1	7	6	Ditto, white	27	0	0	30-0 0
Canada plates, p. ton.	13	10	0	Ditto, patent shot	22	10	0	23-0 0
Ditto, at works	12	10	0	Spanish	18	10	0	18-15 0

* At the works, 1s. to 1s. 6d. per box less.

COPPER.—Advices from Chili show a reduced rate of shipment, the charters having amounted only to 1166 tons, part of which was for the United States. This has in some measure had the effect of causing a steadier tone to be manifested in the market, and prices have become decidedly firmer. About 300 tons Chili bar have been sold at 69l. 10s., and there are buyers of Banca at 83l.

IRON.—In Staffordshire, the houses which supply the best qualities of iron for the Lancashire machine makers have felt the improvement in the cotton trade, by the receipt of orders; but, as a rule, the trade generally continues flat. There is little doing, and prices, except for particular makes, are so low that not a few represent the manufacture as unprofitable, if not involving actual loss. Now that North Staffordshire, as well as the Cleveland district and South Wales, have successfully reduced their rate of wages, South Staffordshire must, without doubt, follow their example. In Welsh, dulness still prevails in the trade. In some of the branches, at several of the works the men are not employed half-time, while in others there is a little more doing than at the commencement of the quarter. In Swedish iron not much activity prevails. In Scotch pig-iron the tendency of the market during the week has been towards improvement, and a considerable amount of business has been done, and the price has advanced to 52s. 3d. cash.

LEAD.—A very fair amount of business continues to be done, and a decided improvement in the demand has taken place, and prices continue very firm at the quotations.

TIN.—The market for foreign has assumed a firmer tone, and the price of Straits has become a trifle better, business having been done at 87l. 10s., and holders are very firm, at 87l. for a quantity.

SPELTER.—The market remains firm, at 25l. for parcels on the spot, although no large amount of business has been done: 50 tons, special brand, have been sold at 20l. 7s. 6d.

TIN-PLATES.—Quietness is still evinced in the trade, and no export orders of any importance have yet come to hand.

STEEL is rather more active.

QUICKSILVER.—A moderate demand still exists.

The settlement of the fortnightly account has again occupied the chief attention of the dealers in the MINING SHARE MARKET, and, on the whole, not so much business, perhaps, has been transacted this week as we had to report upon in our last. Still there is great activity in the market generally, and some of the shares, which have evidently been "beared" to a large extent, and are, consequently, short for delivery, are much firmer, and in good demand. The shares mostly dealt in have been West Frances, Prince of Wales, Chontales, West Chiverton, Chiverton Moor, East Grenville, Great Wheel Vor, Marke Valley, North Crofty, West Caradon, Wheel Chiverton, Wheel Grenville, Wheel Seton, North Treskerby, East Gunnislake and South Bedford, Great Laxey, Frontino, South Frances, St. John del Rey, West Seton, Stray Park, Drake Walls, West Drake Walls, and others. Prince of Wales shares have been largely dealt in, the price fluctuating between 57s. 6d. and 61s., and leaving off 3 to 3½; in the 65 cross-cut south the appearances indicate the lode to be near at hand, and any hour may reach this important point. In the 55 east the lode is worth 70l. per fm. A winze in the 45 east, 4 fms. ahead of the 55 end, has improved from 20l. to 30l. per fm. The 55 west is worth 12l. per fm. A winze has also been commenced close to the western cross-course, in the 45 west, worth 20l. per fm. Carn Brea, 24 to 26; Chiverton Moor, 6 to 6½. Chontales shares very largely dealt in, at 4½ to 4½. Clifford Amalgamated, 5½ to 6; Devon

Great Consols, 430 to 440; Drake Walls, 10s. to 12s. 6d.; East Basset, 9 to 10s.; East Caradon, 4½ to 4½; East Gunnislake and South Bedford, 2½.

Great Retallack, 2½ to 3½; at the meeting the accounts showed a balance of liabilities over assets of 445l. 7s. 1d., and a call of 2s. per share was made. The silver-lead ore sold during the quarter realised 662l. 14s. 5d., and from the report of the agents it is expected this quantity will be increased during the next quarter. In No. 2 shaft the lode is worth 3 cwt. per fathom, and every foot sinking it is expected an improvement may take place, as the bunch of ore worth 12 cwt. per fathom is dipping towards it. The agents state that at no former period has the mine looked so well as at present. East Carn Brea, 2 to 2½; East Lovell, 8½ to 8½; East Russell, 20s. to 25s.; East Wheel Grenville, 2½ to 2½; Frontino and Bolivia, 17s. to 18s.; Great Laxey, 17½ to 18½; Great North Laxey, 3 to 3½; Great South Tolgus, 20s. to 22s. 6d. West Frances shares, in our last, were stated to have risen to 24—this should have been 34—and they have since reached 45, leaving off 35 to 40. Great Wheel Vor, 20½ to 21½; Hingston Down, 38 to 39; Maes-y-Safn, 27 to 29; Marke Valley, 6½ to 6½; New Seton, 55 to 65; North Chiverton, 4 to 5; North Crofty, 3 to 3½; North Downs, 14 to 14½; St. John del Rey, 33 to 34; North Treskerby, 30s. to 32s. 6d.; Providence Mines, 26 to 28; South Caradon, 410 to 420; South Frances, 24 to 26; Stray Park, 3 to 4; Tineroff, 13½ to 14½; West Basset, 2½ to 2½; West Caradon, 9 to 10; West Chiverton, 67 to 68; West Drake Walls, 3 to 3½; West Great Work, 3½ to 3½; West Prince of Wales, 9s. to 11s.; West Seton, 190 to 195; West Wheel Kitty, 3 to 3½; Wheel Basset, 75 to 80; Wheel Chiverton, 3 to 3½; Wheel Grenville, 31s. 6d. to 33s.; Wheel Mary Ann, 20 to 21; Wheel Seton, 87½ to 92½. Copper Hill, 2½ to 3; at the meeting, held on January 21, the accounts showed a loss on four months' working of 47l. 7d. only, and a balance against the mine of 532l. 16s. 11d. The mine seems to have better prospects: the encroachments of East Basset and Wheel Basset Mines on the valuable copper ore ground of this mine is not yet settled, but the committee are authorised to take such steps as they may deem best to protect the interests of Copper Hill, and to obtain compensation for the ores taken out of the sett by East Basset. Wheel Basset adventurers, it is said, have holed their 70 fathom level into Copper Hill, both on Padden's and Mitchell's lodes. Cargill, 13 to 15; at the meeting a dividend of 10s. per share was declared. Gawton, 3 to 3½; the lode cut in the 70 fathom level cross-cut is worth 25l. per fathom; the lode in the 50, at Moor's winze, will turn out 8 tons of ore per fathom. Great North Downs, 4½ to 4½; the tutwork, in the aggregate, is valued at 168l. per fathom; two stopes in the 74 are valued at 40l. per fathom. Penhall's accounts, for the quarter, show a loss of 26l., after charging for a 22-inch steam drawing-engine. East Rosewarne, 5s. to 7s. 6d.; the lode in Hallett's shaft is worth 10l. to 12l. per fathom.

The Market for Mining Shares on the Stock Exchange has been quiet during the week, the fluctuations being very trifling. St. John del Rey, 31½ to 32½; Don Pedro, 2½ to 2½ prem.; Anglo-Brazilian, par to ½ prem.; Rossa Grande, par to ½ prem.; Chontales, 3 to 3½; Pastorena, ½ dis. to par; Anglo-Italian, par to ½ premium. United Mexican have been in demand, in consequence of the improved advices received from the mines, at 1½ to 1½. Anglo-Argentine, 1 to 1½ prem.; Central American, ½ dis. to par; Port Phillip, 1½ to 1½, ex div.; Yudanamatana, 1 to 1½; Panulcillo Copper, 3 to 3½; Alamillos, 1½ to 1½; Frontino and Bolivia, 3 to 1. In British mines there has been a very good business transacted, and prices have been well maintained. Great Laxey are in demand, at 17½ to 18½. Great Vors are being absorbed, at 20½ to 21½. North Crofty have risen to 3½, 3½, consequent on an improvement in the 180 fm. level, valued at 90l. per fm. Prince of Wales steady, at 59s. to 61s. West Chiverton, 66 to 68; the report from this mine is very good; at the meeting, to be held in about a fortnight's time, the accounts will show an improving position, after payment of usual dividend. Chiverton Moor shares are steady, at 6; on the other hand, without an assignable cause, Chiverton have fallen to 3½, 3½. The metals of lead and tin are somewhat firmer, and improving in tone. Copper, on the other hand, is flatter, and dull in appearance. A corresponding effect is produced in shares of mines selling those minerals. Minerals are very firm. Maes-y-Safn enquired for, at 28 to 29. The annual meeting of the Rhosmor Company is to be held in Liverpool, on Monday. The New Penrose Mines Company has been introduced to the public under respectable auspices, and the Australian United Gold Mining Company is being privately brought out by the Mining Association, and shares are largely absorbed; the direction is of a practical and respectable character.

IRISH MINE SHARE MARKET.—The superabundance of capital waiting for profitable employment is beginning to make itself felt on the market for various securities of a bona fide character, and, consequently, shares in our more prominent mining enterprises have been favoured with particular attention. Mining Company of Ireland shares (7l. paid) have been so much in request that they reached the advanced price of 17l. 15s. each, but this large rise brought sellers, and the closing figure is now that of last week—17l. 7s. 6d. Wicklow Coppers were largely taken at 16l. 15s. (2l. 10s. paid), and Connors are also in better request for cash transactions at 4s. per share. General Mining Company for Ireland changed for immediate transfer at 2l. 5s.; and Cape Coppers (7l. paid) may be quoted at 9l. 2s. 6d. to 9l. 5s. cash. On the whole, the market for mining securities appears to improve rapidly, and further advances may be expected in the prices of all the above-mentioned companies.

At Redruth Ticketing, on Thursday, 2148 tons of ore were sold, realising 11,323l. The particulars of the sale were:—Average standard, 101l. 9s.; average produce, 7½; average price per ton, 5l. 5s.; quantity of fine copper, 169 tons 17 cwt. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Dec. 26	1835	104	20	7½	5 9 6	13810½d. £69 6
Jan. 2	2165	105	30	7	4 13 0	13 2½ 68 16
" 9	1362	116	0	5½	5 7 6	12 9 63 18 0
" 23	4249	116	9	5½	5 17 0	13 7 63 0 0
" 30	2148	101	9	7½	5 5 0	13 5½ 67 67 0

Compared with last week's sale, the decline has been in the standard 3l. 10s., and in the price per ton of ore about 5s. 6d. Compared with the corresponding sale of last month, the decline has been in the standard 2l. 13s., and in the price per ton of ore about 4s. 6d.

The following dividends were declared during January:—			
Mines.	Per share.	Amount.	
Devon Great Consols	£7 0 0	£7168 0 0	
South Caradon	6 0 0	3072 0 0	
Marke Valley	6 0 0	1576 0 0	
Wheel Jane	2 0 0	1024 0 0	
Cwm Erfa	1 0 0	867 0 0	
East Pool	5 0 0	640 0 0	
Gawton	0 3 0	600 0 0	
South Wheel Frances	1 0 0	498 0 0	
Cargill	0 10 0	458 0 0	
Bronfloy	6 0 0	300 0 0	
Summer Hill	0 7 6	190 10 0	
Port Phillip	0 1 6	750 0 0	
Total		£17,140 10 0	

At South Caradon Mine meeting, on Tuesday, the accounts for September and October showed a profit of 2988l. 7s. 11d. A dividend of 3072l. (6s. per share) was declared, and 3011l.

the secretary of the company, and a committee of London gentlemen was also appointed to have the general management of the mine. Mr. Francis Pryor was appointed the manager, and Mr. Thomas Pryor the local purser. The majority of the shares were represented at the meeting, and it is satisfactory to find that a good course of copper ore has been discovered by cross-cutting in the 50 fathom level, north of Stevens's shaft, which is worth fully 200 per fathom. We are also pleased to hear that an engine of sufficient power is to be erected to work the old Wheal Buller. It is well known that this mine was formerly one of the richest copper mines in Cornwall, and there are ample grounds for believing that from the large tract of unexplored ground, extending towards Wheal Bassett and South Bassett, that this part of Wheal Buller sett will yet prove as largely productive as it formerly did.

At Penhalls Mine meeting, on Tuesday, the accounts for the three months (after charging for the new steam drawing-engine) showed a loss of 267.4s. The report stated that throughout the mine generally considerable improvements had taken place during the past three months, while at Penhalls proper important discoveries had been made. The manager thought that in the coming summer the Pink Mine would be unwatered, and prove a valuable addition to the sett.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT an increase in the coin and bullion of 122,000l., represented by a corresponding increase in the coin and bullion of the other side of the account. In the BANKING DEPARTMENT there is shown an increase in the "public deposits" of 253,346l., and in the "rest" of 11,952l.; increase in the "other deposits" of 126,230l., and in the "other side of the account" of 61,440l., together 187,670l.—117,634l. On the other side of the account there is shown a decrease in the "Government securities" of 200,800l., and in the "other securities" of 194,628l.—395,428l., which added to the decrease 117,634l. on the liability side, shows a total increase in the reserve of 513,962l.

On the Stock Exchange an active enquiry for Mining Shares has prevailed during the week. The following prices were officially recorded in British Mining Shares:—Great Wheal Vor, 20s, 20s, 21s; Great Laxey, 17s; Wheal Chiverton, 3s; West Chiverton, 6s, 6s, 6s; East Carn Brea, 2s; Prince of Wales, 3s. In Colonial Mining Shares the prices were:—Yudanamutana, 11-16th, 1s; Port Phillip, 17-16th, 1s, 1s, 1s; Cape Copper, 8s, 8s, 9s. In Foreign Mining Shares the prices were:—St. John del Rey, 34s, 35s, 33s, 30s, 31s, 32s; Chontales, 4s, 4s, 4s; Don Pedro, 2 13-16ths, 2s, 2 11-16ths, 2s, 2s prem.; Panulillo, 1s; Alamillos, 9-16ths; Frontino and Bolivia, 1s, 1s, 1s.

The CAPEL BANHAGLOG LEAD MINING COMPANY with a capital of 15,000l., in 5000 shares of 3l. each, has issued its prospectus, which will be found in another column. It is stated that one-fifth of the shares is already subscribed for. The purchase money is 5499l., of which 1500l. is to be paid in cash and the remainder in shares. The property has been favourably reported upon by Capt. John Kitto. It is situated about 2 1/2 miles from the town of Llanidloes, in Montgomeryshire, and adjoins the Tyllwch Station of the Mid-Wales Railway. Its geological position, combined with the numerous advantages surrounding it for facilitating its development can scarcely be surpassed. The sett is very extensive, being from 1 to 1 1/2 mile on the line of the lodes from east to west, and of a corresponding width, and embraces a magnificent mountain range, traversed with lodes of large dimensions. The one on which operations are now being carried on being at least 12 feet wide, and is identical with, and in close proximity to, the lode in the Mid-Wales Mine, on which operations are now being so successfully conducted, and within 100 yards of the mouth of the Mid-Wales Company's deep adit level.

COAL MARKET.—The fresh arrivals this week number 128 ships; this supply, coupled with mild weather, had a depressing effect upon the market for house coals, and business ruled dull throughout, at rather lower prices than last quoted. Hartley coals have been tolerably steady, at previous value. Haswell Wallsend, 17s. 6d. per ton; South Hetton Wallsend, 17s. 6d. per ton; New Belmont Wallsend, 16s. per ton; Hetton Lyon's Wallsend, 15s. per ton; Tunstall Wallsend, 16s. per ton; West Hartley, 15s. 3d. per ton. Unsold, 24 cargoes; 45 ships at sea.

NEW COMPANIES.—Among the undertakings registered during the past week are the Patent Safety Gun-Cotton, the Montgomeryshire Lead and Barytes, and the Patterseyke Mining Companies. The usual particulars will be given in next week's Journal.

THE COPPER TRADE.—Messrs. Vivian, Younger, and Bond (Jan. 31) write—There has been but little business transacted in Liverpool in Chili produce. A parcel of 60 tons of bars of ordinary brand, which has been rather pressing on the market of late, was parted with at 68s. 10s., whilst 150 tons of a favourite brand to arrive fetched out of second hands 69s. 10s. There is nothing new of the latter description to be had, on similar conditions, under 70s. Of regular, 300 tons were sold at 14s. per unit. Advances received from Chili report for the fortnight ending Dec. 16 as comprising 120 tons of fine copper, which is, as was anticipated, considerably under the average. The same mail brings news of a rise both in freight and exchange, to which it is added that some small mines have ceased to work. The news has given the metal some what more tone, and it looks as if present values will be maintained. Urtena ingots have fetched 73s. 10s., and are held for 74s. English and fine foreign copper quiet.

SOCIETY OF ENGINEERS.—On Monday evening, Feb. 3, at half-past seven o'clock, a paper will be read, "On the Surveys of Proposed Lines for a Ship Canal between the Atlantic and Pacific Oceans," by Dr. Cullen.

Vice-Chancellor Wood has made an order that the voluntary winding-up of the Prince of Wales Slate Company (Limited) be continued under the supervision of the Court, and has confirmed the appointment of Messrs. F. B. Smart and H. L. Hammaek as liquidators.

JOINT-STOCK COMPANIES.—The prospect of a revival in commercial affairs will naturally create a desire amongst the many who have mineral and other properties to offer to the public as investments to possess as intimate an acquaintance as possible with the laws by which public companies are governed; attention may, therefore, be directed to the new edition of the admirable little handbook—"JOINT-STOCK COMPANIES: HOW TO FORM THEM"—by Mr. Thomas Tapping, barrister-at-law, which has just been issued for half-a-crown. The author's object has been to furnish not only an epitome of the law as it stands, but also to express it in popular and intelligible language; in this he has thoroughly succeeded, and as the whole of the information has been arranged in the form best calculated to meet the wants of the non-professional reader, it can scarcely fail to be favourably received. The book is published at the Mining Journal office, and will be forwarded, on receipt of the amount to those requiring it.

PAPERS ON PRACTICAL MINING.—The thoroughly practical character of the papers read at the recent meeting of the Miners' Association of Cornwall and Devonshire will render the detailed report of the meeting particularly acceptable to all engaged in mining operations. The volume contains papers "On Bergstrom's Boring-Machine," now in use at the Perseberg Mines, Sweden, and "On the Rock Boring-Machine used at the Altenberg Zinc Mines," by Dr. C. Le Neve Foster; "Remarks on Boring-Machines," by Charles Fox; "On Tunnelling by Machinery," by Gen. Haupt; "On High-Pressure Steam-Bollers," and "On Jordan and Darlington's Hydraulic Mining Machinery," by T. B. Jordan; "On Beaumont and Locock's Tunnelling Machine," by Capt. H. Lock, R.E.; "On the Perseberg Iron Mines," by Dr. C. Le Neve Foster; "On an Excursion to the Chiverton District," by Francis Oates; on the same subject, by William Argall; "On Vestiges of Ancient Tin Workings in the Looe Pool Valley," by R. J. Cunneen; "On the Occurrence of Wood Tin at the Great Wheal Vor," by G. M. Henry; "On the Calamine Deposits of Sardinia," by F. G. Davis; "On Hydraulic Apparatus as Motors," and "On Transferring Motion in Mining Operations," by John Darlington; "On the Boring-Machine exhibited, or described, at Falmouth (a tabulated account thereof)," by Dr. C. Le Neve Foster; "On Brunton's Rock Tunnelling-Machine," by J. D. Brunton; and on the Use of Doering's Boring-Machine at Tincroft Mines," by Dr. C. Le Neve Foster.

The price of the book is 1s., and it will be forwarded from the Mining Journal office on receipt of 13 stamps.

"Pressure on our space compels us to omit, until next week, the communication from Mr. P. S. Hamilton, on "Mining Enterprise in Nova Scotia."

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, COZELL STREET NORTH, BIRMINGHAM. STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—REFINED METALLIC BISMUTH. OXIDE OF COBALT. GERMAN SILVER—IN INGOTS, SHEET, WIRE, &c. NICKEL AND COBALT ORES PURCHASED.

GOLDENHILL, COBALT, NICKEL, COLOUR, BORAX AND CHEMICAL WORKS. NEAR STOKES-UPON-TRENT, STAFFORDSHIRE.

JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER. Purchaser of Borate of Lime and Tincal. Teacher of Practical Mining in the late Mining School of Cornwall, and Principal of the Engineering Academy, 39, Upper Parliament Street, Liverpool.

STEAM-BOILERS made by WILLIAM WILSON, LILYBANK BOILER WORKS, GLASGOW, on the most improved principles, for home and export. All boilers made of the best material and workmanship, proved and warranted tight under a high pressure, and delivered at any railway station, or shipping port in the kingdom at moderate rates. Lithograph of boilers forwarded post-free on application.

TIN, SPELTER, &c.—A Gentleman, who has represented for many years a FIRST-CLASS COPPER HOUSE in BIRMINGHAM, is DESIROUS OF ADDING TO HIS PRESENT (only) AGENCY OF COPPER, ONE OF TIN, SPELTER, &c.

TO ENGINEERS.—WANTED, by the DOWLAIS IRON COMPANY, TENDERS for a POWERFUL WINDING ENGINE, for a deep colliery. Particulars may be had on application to the DOWLAIS IRON COMPANY, Merthyr Tydfil.

TO CONTRACTORS, OR MINING AGENTS.—WANTED, TO PURCHASE, about half a mile of SECONDHAND LIGHT RAILS, with or without wagons, for a tramroad. Anyone having the above for sale, send particulars to Mr. J. S. Toor, Mining Agent, Bantry, Cork, Ireland.

LONDON AGENT.—A MECHANICAL ENGINEER, a man of extensive and varied business experience, who holds a very responsible public appointment, WISHES TO OCCUPY THE WHOLE OF HIS SPARE TIME (which is considerable) in the business of some AGENCY. Address, No. 1045, Builder Office, 1, York-street, Strand, W.C.

WANTED, by a PRACTICAL MINER, well acquainted with GOLD, LEAD, and COPPER MINING, and fully capable of UNDERTAKING THE MANAGEMENT of any property, a SITUATION, either as OVERMAN or UNDER-AGENT. No objection to go abroad. Aged 32. Address, "W. H.," Brown Horse Inn, Dolgelly, Merionethshire.

WANTED, by the Advertiser, who thoroughly understands the REFINING OF NICKEL and COBALT, a SITUATION as MANAGER in the ABOVE BUSINESS. Would have no objection to put down a new property. Address, "E. F.," care of Henry Greenwood, Advertising Agent, Liverpool.

TO ENGINEERS AND COLLIERY PROPRIETORS. WANTED, a RE-ENGAGEMENT as MINERAL SURVEYOR or DRAUGHTSMAN. Good references and specimens of drawing. Apply, "A. Z.," Mining Journal Office, 26, Fleet-street, London, E.C.

WANTED, FOUR ABLE SHAFTMEN, TO PROCEED TO IRELAND.—Apply, with references or testimonials, stating wages required, to W. G. ROBERTS, Silver Mines, Nenagh, Ireland.

WANTED, FOUR THOUSAND POUNDS, upon SECURITY of an EXCELLENT COLONIAL COLLIERY. Apply, with real name and address, to J. H. HOWARD, Esq., solicitor, Quality-court, Chancery-lane.

WANTED, TO PURCHASE, a LIFT (second hand) of 22 in. or 24 in. PUMPS, complete, from 100 to 300 yards. Address, with all particulars, to E. STOKES ROBERTS, Esq., Public Offices, Chester.

WANTED TO PURCHASE, in good condition, from 48 to 100 HEADS OF STAMPS, with axles and lifters, complete. Also, two or three good WATER WHEELS, from 20 to 30 ft. diameter. State lowest price for cash, to "J. L.," Mining Journal Office, 26, Fleet-street, London, E.C.

SLATE QUARRY.—CAPITALISTS can PURCHASE, or become interested in, a most valuable GERMAN SLATE QUARRY, producing now 400 tons of slate monthly. It is intended largely to increase this quantity, and to arrive at 1500 tons. By the aid of low wages and sawing machinery, a ton of slate is manufactured at 11s., against a selling price of 40s. per ton roofing slates, and 65s. for slabs. The quarry, situated on a mountain rise, is opened by five floors, 80 yards wide, showing a splendid pure slate rock of the finest quality, blue durable colour, and easy split. An inspection of the works will convince an experienced investor that they can rival with the best paying quarries in Wales, and that a high and safe dividend is insured. Apply, with references, for further particulars, by letter, to "Q. C.," care of Messrs. Wm. Dawson and Sons, 121, Cannon-street, City, E.C.

A VALUABLE AUSTRALIAN COAL PROPERTY FOR SALE, OR LEASE. Address, "W.," Post-office, Upper Baker-street, N.W.

TO BE SOLD, for £150, a 56-in. cylinder PUMPING ENGINE 10 ft. stroke in cylinder, and 9 ft. in shaft, in good order and condition. Can be seen standing. Apply to WILLOUGHBY BROTHERS, Central Foundry, Plymouth.

FOR SALE, a PORTABLE STEAM ENGINE of 25 horse power. Winding gear to order to suit circumstances. SECOND-HAND PORTABLE STEAM ENGINES, with new MORTAR MILLS, SAW TABLES, &c., on advantageous terms. Apply to Messrs. BARROWS and CARMICHAEL, Engineers, Banbury, Oxon.

THE CAPEL BANHAGLOG, OR EAST MID-WALES LEAD MINING COMPANY (LIMITED). Capital £15,000, in 5000 shares of £3 each.

Deposit on application 10s., and on allotment 20s. Shares can be paid in full, and in all such cases fully paid-up share warrants will be issued, which warrants, when once issued, are transferable to bearer without any transfer deed or expense of stamps.

To be registered under the Companies Act of 1867, whereby each person's liability is limited to the amount of shares subscribed for. BANKERS—THE CITY BANK, Threadneedle-street, London.

SECRETARY—MR. J. F. NICHOLLS. TEMPORARY OFFICES,—70, CORNHILL, LONDON.

PROSPECTUS. This is a company formed (with limited liability) under the Joint Stock Companies Act of 1867 for the purpose of purchasing a lead mine, known as the Old Chapel or Capel Banhaglog Mine, and for continuing the works thereof. It is situated in the county of Montgomeryshire, and forms a part of the rich silver-lead district of North Wales; it is close to the Tyllwch Station, on the Mid-Wales Railway.

The mine from its very favourable situation can be most cheaply and economically worked. The lodes running through this valuable property are a continuation of the rich lodes of the Mid-Wales Mining Company, whose property adjoins this estate, and from the appearance of the lodes, and from the fact as they have been seen, there is every reason to believe that they will prove to be equally productive. The lode in the adit level at the Mid-Wales Mine is an enormous lode, 12 ft. wide, and producing at the present time 2 tons of lead ore to the fathom, with every indication of further improvement.

It is believed that the property intended to be purchased by this company can be fully developed, and placed in a paying condition, by a moderate expenditure of capital—probably the entire work can be completed for less than £4000. If no allotment be made the deposit will be promptly returned, without deduction.

No application for less than five shares will be entertained, and the allotments will be made according to priority of application. Samples of the ores can be seen either at the offices or at the brokers. Prospectuses and forms of application for shares can be obtained from the secretary.

The following is the report of Capt. JOHN KITTO, late manager of the celebrated Great Laxey Mines:—Shrewsbury Jan. 9, 1868.—GENTLEMEN: This valuable lead mining property is situated about 2 1/2 miles from the town of Llanidloes, in Montgomeryshire, and adjoins the Tyllwch station of the Mid-Wales Railway. Its geological position, combined with the numerous advantages surrounding for facilitating its development can scarcely be surpassed. The sett is very extensive, being from one to one-and-a-half mile on the line of the lodes from east to west, and of a corresponding width, and embraces a magnificent mountain range traversed with lodes of large dimensions. The one on which operations are now being carried on being at least 12 feet wide, and is identical with, and in close proximity to, the lode in the Mid-Wales Mine, on which operations are now being so successfully conducted, and within 100 yards of the mouth of the Mid-Wales Company's deep adit level.

The property is beautifully situated for adit level explorations; the mountain into which the lodes run being at least 100 fathoms high from its base, and surrounded by valleys containing water in sufficient quantity for dressing and other purposes, which is an essential to successful mining, and cannot be too highly appreciated.

An adit level is now being driven opposite the Mid-Wales Mine, and, as before stated, on the same lode, which is in every respect of the same favourable character, and on being driven into higher ground the result will undoubtedly prove equally satisfactory.

In conclusion, I may state that this property has long been regarded by practical men as a valuable piece of mineral ground, and several previous attempts have been made to obtain a grant of it but without success, and I must congratulate you on being so fortunate in securing such a valuable property, fully believing that it only requires a spirited and judicious development to ensure a lasting and profitable mine. JOHN KITTO.

To the Directors of the Capel Banhaglog, or East Mid-Wales Lead Mining Company.

GOLD MINING IN NOVA SCOTIA.—

Captain J. ROBERTS, who has been VISITING THE MINES OF NOVA SCOTIA the last two months, has come to the conclusion that, with judicious management, Nova Scotia Gold Mines can be made to pay handsome dividends. By the erection of machinery and good discipline, like he was accustomed to in Gongo Soco and St. John del Rey; but Captain Roberts deeply regrets to find that some of his countrymen who came out here got in such discredit by their reckless mismanagement of the Nova Scotia Gold and Land Company's property, as to leave very little confidence in their ability as mining men, and which, it is well known, they cannot do without. Capt. Roberts has seen more visible gold in the veins here than in any country he has been into. Mansion House, Halifax, Dec. 4, 1867.

ROYAL COPPER MINES OF COBRE.—The half-yearly general meeting of this company having been appointed to be held on Thursday, the report and accounts of the preceding year were submitted. A reference to this (which appears in another column) will show that the railway suit, so important to the company's prospects, has been decided in favour of the Cobre Company, and that the reduction of the tariff from \$6 1/2 to \$5 per ton has been made, the reduction comprising the whole of the year. By the estimates it appears that for the year ending Dec. 31, 1867, a balance seems to be against the company of 10957. 11s. 2d., but it should be observed that that is assuming the price of the ores unsold to be taken at 13s. 6d. per unit, while those already realised have brought 14s. 2d. per unit, a difference which would balance the account, should the better price be obtained for the unsold ores. This must be so far assuring to the shareholders after the trying operations of the previous year, and is no doubt attributable to the judgment and ability of Mr. Clemes, who has been in charge of the works during the last year. Another feature in the report is the prospect held out that the railway company will still further reduce their charges from \$5 to \$4 per ton, being a saving of 20 per cent. on the amount now paid. Some other savings are also contemplated, while the interest upon the bankers' loan will cease upon their being paid off, the accounts showing that the balance now at the bankers, and the arrears of calls due, are fully sufficient for that purpose. Mr. Clemes, who has just returned from the mines, not having been able to complete his report, and there not being a sufficient number of proprietors present to constitute a meeting, the meeting was adjourned till Thursday next.

JAVALI MINE.—We understand that the 40,000 shares in the Javali Company reserved for the shareholders in the Central American Association have been wholly taken up and paid upon by them, and that the remaining 10,000 shares in this undertaking, intended to be offered to the public, will be duly advertised in next week's Journal. We are informed that arrangements have been completed by which the Central American Association will be enabled to take the necessary steps for the reduction of its shares from 5l. to 1l. Out of the 30s. at present paid up, 1l. will shortly be returned. The shareholders will then have 10s. paid-up, with a further liability of 10s. per share only, instead of the present liability of 3l. 10s., and they will still be the owners of the Bayano Estate, and other properties, which will, it is fully believed, realise three times the amount originally paid for them whenever it may be deemed advisable to dispose of them.

MINING ASSOCIATION.—The directors have issued a circular to their shareholders, in which they invite subscriptions for shares in a new Gold Mining Company, to purchase and work some valuable gold mines in the famous district of Victoria, Australia. As the undertaking will probably be made public next week, we shall defer particulars till then, in the meantime simply remarking that the company appears to be exceedingly well organised, and its object seems to hold out more than usual chances of success.

NEW PENROSE AND UNITY SILVER-LEAD MINING COMPANY.—In confirmation of the favourable remarks in last week's Journal, relative to the above company (the prospectus of which will be found in another column of this day's Journal), it appears that the prospects and reasonable terms proposed are such as to have induced some highly respectable men to become interested. It is expected that the share list will soon be completed, and the mine in full operation. The shafts being sunk and levels driven, there is little to do beyond erecting an engine, when a considerable number of hands can be employed, both for raising and dressing the ores, which will, it is hoped, be beneficial to the employer and employed. Silver-lead ore is a produce, particularly when it contains over 20 ozs. of silver to the ton, which enables even moderately rich silver-lead mines to be worked at a profit. It will be pleasing to find that the successful working of New Penrose leads to the opening of other mines in the district, and thus add to the prosperity of "One and All."

LEAD ORES.				
Date.	Mines.	Tons.	Amount.	Purchasers.
Jan. 22—	Llangynog United .. 55	.....	£11 3 0	.....
24—	Great Laxey .. 100	.....	22 8 0	.....
24—	Wheal Mary Ann .. 60	.....	33 4 0	.....
27—	East Logyias .. 60	.....	11 2 0	.....
—	Cwmystwith .. 60	.....	11 9 6	.....

BLACK TIN.				
Date.	Mine.	Tons.	Price p. ton.	Amount.
Jan. 23—	Penhale Wh Vor 4 10	0 2	£43 2 6	.....
25—	Great Wheal Vor 69	5 2 2 1/2	—	3581 11 3
27—	Prosper United .. 4 3	0 8 ..	53 0 0	246 12 9
—	ditto .. 0 18	3 21 ..	40 0 0	37 18 6

COPPER ORES.				
Sampled at the Harrington Dock Copper Ore Yard, Liverpool, on Jan. 11.				
	Tons.	Price.	Purchaser.	
Ex Gertrude	77	£ 3 14 3	.....	Charles Lambert.
ditto	70	5 14 3	.....	ditto
ditto	70	5 15 0	.....	J. Reys and Sons.
ditto	6	18 1 0	.....	Sims, Williams, & Co.

ARRIVALS AT LIVERPOOL.—The following have arrived for Messrs. JAMES LEWIS and Son's Ore Wharves. Nauphante, from West Coast, S.A., with 36 tons of argentiferous regulus. Javali, from Maracilles, with 30 tons of copper ore. Caribbean, from Colon, with 2 tons of copper and silver ore. Escort, from New York, with 145 tons of copper ore. Robert Kerr, from New York, with 85 tons of copper ore.

COPPER ORES.				
Sampled Jan. 15, and sold at Tabb's Hotel, Redruth, Jan. 30.				
Mines.	Tons.	Price.	Mines.	Tons.

South Caradon .. 80	.....	£5 18 0	North Treskerby .. 55	.....	£4 2 6
ditto .. 63	.....	6 2 0	ditto .. 49	.....	5 4 0
ditto .. 57	.....	9 19 6	ditto .. 49	.....	5 6 0
ditto .. 56	.....	7 12 6	Wheal Rose .. 85	.....	5 9 0
ditto .. 43	.....	9 17 6	ditto .. 51	.....	5 3 6
ditto .. 43	.....	9 14 0	ditto .. 37	.....	4 4 6
ditto .. 41	.....	7 7 0	ditto .. 37	.....	4 4 6
ditto .. 43	.....	10 1 0	Glasgow Caradon .. 81	.....	4 6 6
ditto .. 39	.....	10 9 6	ditto .. 70	.....	5 2 6
ditto .. 38	.....	9 17 6	ditto .. 47	.....	3 8 0
Clifford Amalgamated .. 101	.....	5 16 6	Phoenix Mines .. 76	.....	4 1 6
ditto .. 100	.....	4 2 6	ditto .. 71	.....	2 16 6
ditto .. 60	.....	3 1 0	Craddock Moor .. 77	.....	4 19 0
ditto .. 61	.....	2 10 0	ditto .. 11	.....	8 6
ditto .. 69	.....	2 15 0	ditto .. 11	.....	8 6
ditto .. 65	.....	3 10 6	West Caradon .. 37	.....	3 18 6
ditto .. 35	.....	4 5 6	ditto .. 60	.....	6 3 0
ditto .. 17	.....	3 5 6	Poldice Mines .. 55	.....	3 5 6
North Treskerby .. 60	.....	4 14 0	Tywarnhaile .. 9	.....	3 4 6
ditto .. 66	.....	4 16 6			

ditto	...	56	...	4	16	6					
TOTAL PRODUCE.											
South Caradon	...	527	...	£1168	11	0	Phoenix Mines	...	147	...	£510 5 6
Clifford Amalgam	...	495	...	1934	1	0	Craddock Moor	...	120	...	673 0 6
North Treskerby	...	270	...	1298	15	6	West Caradon	...	107	...	581 4 6
Wheal Rose	...	220	...	1129	1	6	Poldice Mines	...	55	...	180 2 6
Glasgow Caradon	...	198	...	863	17	6	Tywarhaile	...	9	...	29 0 6

COMPANIES BY WHOM THE ORES WERE PURCHASED.			
Names.	Tons.	Amount.	
Vivian and Sons	540 1/2	£	1967 19 3
Froeman and Co.	81 1/2	.....	396 16 6
Grenfell and Sons	270	.....	1298 15 6
Sims, Williams, and Co.	181	.....	1760 16 0
Williams, Foster, and Co.	227 1/2	.....	1860 8 0
Mason and Elkington	357	.....	1722 5 0
Copper Miners' Company	211	.....	961 16 6
Charles Lambert	185 1/2	.....	1693 11 0
Sweetland, Tuttle, and Co.	87	.....	755 11 0

Total ..	2148	.....	£11,323 0 0
Average standard ..	£101 9 0	Average produce ..	£5 0
Average price per ton ..	2148 tons	Quantity of fine copper ..	169 tons 17 cwt
Amount of money ..	£11,323 0 0		
LAST SALE.—Average standard ..	£116 9 0	Average produce ..	5 1/2
Standard of corresponding sale last month, £104 2 6	Produce, 7 1/2.		

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday next—Mines and parcels.—Prosper United 500—Carn Brea 280—Par Consols 258—Léveant 220—East Carn Brea 201—Great South Tolgus 170—North Downs 124—Botallack 113—Greener and Abraham 103—Rosewarne United 73—Wheal Emily Henrietta 58—South Dolcoath 20—Rosewarne Consols 20—Mellencar 20—Champion's Ore 15—Old Fembroke 2.—Total, 2178 tons.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS beg to notify to their friends and the public generally that Mr. W. H. CUELL has retired from the firm, in accordance with a clause in the deed of partnership; and having also sold to the remaining partners all his right, property, and interest in the business hitherto carried on by J. Y. WATSON, F.G.S., NAPOLEON FREDERICK WATSON, and himself, under the name of "WATSON and CUELL," the same will be carried on in future by Mr. J. Y. WATSON and Mr. N. F. WATSON, under the designation of "WATSON BROTHERS," and they take this opportunity to return their most sincere thanks for the great patronage bestowed and confidence reposed in the firm for 24 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in the columns of the *Mining Journal*, which is almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

REVIEW CONTINUED.

NEW EAST RUSSELL sold last year several tons of copper ores, the last parcel averaging 8l. per ton. We have frequently called attention to the merits of this mine as a speculation, and believe if properly carried out it will turn out a great success. The progress, however, has been slower than we expected. Capt. Gifford, the manager of Prince of Wales Mine, writes us, Jan. 26—"I feel sanguine if the shaft were sunk (say) 12 or 15 fathoms deeper we should have a great quantity of paying ground to take away on the cross, or north, lode. The deep adit, which will come under the large gossan lode seen at surface, 60 fms. deep, is getting clear of the influence of the two large cross-courses gone through, and the ground easy for exploring, with a large, strong, and kindly lode; its character everything that can be expected, without a course of ore. In the 20 west we are cross-cutting south, as it appears from the dialling that the main part of the lode is in that direction. It is true we have been expecting something good here for a long time, which has not been realised, but I feel sanguine that those who hold on will be well paid for their outlay. The large lode of gossan, &c., seen at surface cannot, in my opinion, fail to yield a great abundance of copper ore." This lode, he it is remembered, if found rich under the gossan, will give 80 fms. of work to be worked away easily and inexpensively. In Prince of Wales Mine, when shares were at 1s. 6d. each, and the mine almost unrecognized, we held on our large interest, and encouraged others to do so, from our confidence in the opinion of Capt. Gifford, whose good opinion of New East Russell, also, has never faltered or varied; and, although so far disappointed, we hope it will not be long before we have to congratulate ourselves and the other shareholders on the expected success.

STANDARD AND PRODUCE.—One in the produce, or percentage of the ore, is considered about equal to three in the standard, or price of the copper in the ore. So that if the standard drops three, and the produce is up two, it is in reality a rise in the standard of about 3l.

SATURDAY, JAN. 25.—Good demand for Prince of Wales, West Frances, North Crofty, Grenville, Devon Consols, Great Vor, Carn Brea, Chiverton Moor, South Frances, and Marke Valley. West Frances, 30 to 40, and no sellers. Prince of Wales, 58s. to 60s.; Chontales, 4½ to 4¾; Great Wheal Vor, 21 to 22; West Chiverton, 66½ to 68½; Wheal Seton, 88 to 90; East Gunnislake and South Bedford, 23 to 25.

MONDAY.—Market active for West Frances shares, which have advanced to 45l., buyers. Prince of Wales, 58s. to 61s.; West Prince of Wales, 9s. to 11s.; Clifford, 66½; Marke Valley, 6½ to 6¾; North Crofty, 2½ to 2¾; North Trevelyan, 29s. to 31s.; East Gunnislake, 6s. to 6½; West Chiverton, 21 to 23; South Frances, 25 to 27; Wheal Basset, 80 to 85; Wheal Grenville, 33s. to 35s.; East Basset, 9 to 10.

TUESDAY.—The market is rather quiet to-day, with the exception of Chontales and Prince of Wales, which are in good demand. Chontales, 4½ to 4¾; Prince of Wales, 58s. to 61s.; West Frances, 40 to 50; Chiverton Moor, 6 to 6½; Great Laxey, 17½ to 18½; Great Vor, 20 to 22; Marke Valley, 6½ to 6¾; West Chiverton, 2½ to 2¾; Grenville, 32s. 6d. to 35s.; West Chiverton, 66 to 68; West Prince of Wales, 9s. to 11s.; Chiverton, 4½ to 4¾; Carn Brea, 23 to 25; East Caradon, 4½ to 5.

WEDNESDAY.—The market is not quite so firm as yesterday, and shares chiefly dealt in are Chontales, Seton, Prince of Wales, and Chiverton Moor. Chontales, 4½ to 4¾; Seton, 87½ to 90; Prince of Wales, 58s. to 61s.; Chiverton Moor, 6 to 6½; East Grenville, 3½ to 3¾; Great Vor, 20 to 21; Great Laxey, 17½ to 18; Marke Valley, 6½ to 6¾; West Frances, 37½ to 42½; Chiverton, 4½ to 4¾; Grenville, 32s. 6d. to 35s.; West Caradon, 9 to 10; West Prince of Wales, 9s. to 11s.; East Caradon, 4½ to 5; West Chiverton, 66 to 68.

THURSDAY.—Market quiet, and dealers occupied with the settlement of the account. Prince of Wales, 58s. to 60s.; Chiverton Moor, 6 to 6½; Chontales, 4½ to 4¾; West Frances, 37½ to 42½; East Caradon, 4½ to 4¾; Great Wheal Vor, 20 to 22½; West Chiverton, 66 to 68.

FRIDAY.—Dealers still occupied with the settlement of the account. Prince of Wales shares being short for delivery, and the appearances of the mine leading to the expectation of cutting the lode in the 65, advanced to 60s. West Frances, 35 to 40; Chontales, 4½ to 4¾; Great Wheal Vor, 20½ to 21½; West Caradon, 9 to 10; East Grenville, 2½ to 2¾; West Chiverton, 66 to 68.

M. R. THOMAS THOMAS,
ASSAYER, &c.,
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MR. MICHAEL HENRY,
Memb. Soc. Arts, Assoc. Soc. Engineers, Author of the "Inventors' Almanac," and the "Defence of the Patent Law."

PATENT REGISTRATION AND COPYRIGHT AGENT AND ADVISER.
Inventors advised in relation to Patents and Inventive and Industrial Matters. Printed information sent free by post. Specifications drawn and revised. Searches conducted. Abstracts, Cases, and Opinions drawn.

Translations of Catalogues, Trade Notices, and Circulars for the approaching Paris Exhibition. Mr. HENRY has had special experience in technical French, and in French Manufacturing and Commercial Matters.

Offices, 68, Fleet-street, E.C., London, corner of and entrance in Whitefriars street.

MINERAL LANDS OF NOVA SCOTIA.
INTERNATIONAL MINING AGENCY,
OFFICE, SOMERSET HOUSE, PRINCE STREET,
MAIL ADDRESS, BOX 266, G.P.O., HALIFAX, NOVA SCOTIA.
A. HEATHERINGTON, PROPRIETOR.

A Register kept of every description of Mineral Lands and Mining Shares for Sale.—Properties Viewed and Reported on, and their Purchase or Sale, when required, negotiated for a moderate commission.—The services of Explorers, Overseers, &c., engaged for Mine Owners.—Maps, Diagrams, Statistics, and useful information regarding each district supplied.—Returns made for absent proprietors.

Notices to Correspondents.

EARLIER PUBLICATION OF THE MINING JOURNAL.—To meet the wishes of a large number of subscribers, arrangements have been made to publish two hours earlier than heretofore. By this improvement the *Mining Journal* can be delivered in Birmingham, Bradford (Yorkshire), Huddersfield, Leeds, Liverpool, Manchester, Salisbury, Southampton, and Wolverhampton by mid-day at latest, or from four to six hours earlier than previously. Subscribers in the metropolitan districts should likewise receive the Journal by the first morning delivery, and any complaint of their not doing so will be at once attended to.

WHEAL EMILY.—"Inquirer."—The company to work this sett is, we believe, being formed privately, no prospectus being issued. It is intended, we understand, to work it under the Cost-book System. A letter addressed to the manager on the mine will be the readiest means of obtaining a reply to your other queries.

LECTURES ON COAL.—In December, 1865, you published in the *Mining Journal* extracts from a series of lectures by Dr. Frankland, on Coal, at the Royal School of Mines, London. I should be much obliged if some of your correspondents would inform me, through the columns of the Journal, whether the lectures have been published in a separate form, the price, the name of the publisher, &c. If I mistake not, the lectures gave an excellent account of the nature and composition of carbonic acid gas, &c.—P. B. P.

THE COAL TRADE.—"F. S." (Stockton-on-Tees).—The quantity of coal raised in 1866 was 101,630,544 tons, of the value of 25,407,635l. The quantity used in London in the same year was about 6,000,000 tons, which was brought in about equal quantities by sea and by rail. As to the length of time the supply of coal will last, the estimates are so conflicting that no opinion worth giving could be pronounced.

ROYAL COPPER MINES OF COBRE.—"An Old Shareholder."—It is informed that the exact loss the company sustained in 1866 was 25,337l. 6s. 6d., and that for 1867 is estimated at 1095l. 11s. 2d., on the assumption that the unsold ores do not realise more than 13s. 6d. per unit. At the sale in Cornwall, on Jan. 23, ores of 5½ fetched 13s. 8½d. This company's ores are of a much higher percentage, and should command a higher price.

PARIS EXHIBITION.—"D. F." (Barnsley).—The reports of the artizans who visited the Exhibition under the auspices of the Society of Arts are issued by the Society. The price of the volume is 2s. 6d.

SLATE QUARRYING.—"Chwarelwr."—The challenge of Mr. Jenkins, which appeared in last week's Journal, had nothing to do with the point at issue. The point I attempted to draw attention to was whether the scientific geologist, &c., or the honest, practical, and judicious quarryman, is the best judge of the true cleaving slate-rock, and which I thought would not only have been interesting, but edifying to many of your readers. In my opinion it is the vital point of slate quarries, and failing to distinguish between the true cleaving slate-rock and other slaty formation is the chief upon which many a company has foundered and wrecked. * * * At the time I left off working I was employed as dresser of slates at one of the best slate bargains in the Welsh Slate Company's Quarry (Palmerston's); and some time ago some specimens of good cleavage, in blades 8 ft. long to 1-32 in., were forwarded, by request, of the Editor, to the *Mining Journal* office, and noticed in the paper.—"CHWARELWR." (Some testimonials as to character and ability from the manager of the quarry where "Chwarelwr" was employed as a quarryman have been forwarded to us.)

PLUMBAGO.—"R. G. S." (South Molton).—The present price of "Ceylon lump" varies from 23l. to 34l. per ton, whilst "dust" fetches from 10l. to 13l. per ton. These prices are exceptionally high: at the corresponding period of last year the price of "lump" was from 8l. to 10l. per ton lower for similar qualities, and "dust" about 3l. per ton lower.

TRIMLEY HALL LEAD MINE.—This company had its office at No. 3, Great St. Helen's. Can anyone inform me what has become of it?—W. D.

C. S. (Bath).—We believe the mine you refer to is in full work, and very favourable anticipations are entertained by the management as to the future of the company. Further particulars shall be given next week.

THE MINING JOURNAL.

Railway and Commercial Gazette.

LONDON, FEBRUARY 1, 1868.

PEAT IN THE NETHERLANDS.

Although peat does not at present occupy so prominent a position amongst our national industries as could be desired, the value to which it has been turned in other countries, and especially in Holland, should afford sufficient encouragement to those who are fortunate enough to possess peat properties either in Great Britain or Ireland. The use of this substance for fuel was known, we are told, to the ancient Belgæ, whom TACITUS describes with pity as a people compelled to burn their ground for want of wood, and PLINY, with admiration, as a people who fished for fuel, with which, when dried by the wind rather than by the sun, they warmed their bodies benumbed with cold. Thus, the extraction of turf for fuel in Holland dates from the earliest times, though it was not until 1215 that the peasants of Friesland learnt to turn this gift of nature to the best account by chemical preparation. From that period till the present day the consumption of turf in the Netherlands has kept pace with the increase of the population. In 1834 the annual consumption was 22,275,693 tons, and in 1852 this had increased to 33,943,630 tons. These figures are of interest when compared with the consumption of coal in the Netherlands, as showing that peat still holds its own for purposes of fuel, that notwithstanding the great quantities of coal now imported for manufacturing and domestic purposes the demand for peat is constantly increasing, and that this traffic is fifty times as active and extensive to-day as that in coke and coal put together.

The Government has, therefore, been compelled to step in to stay the wholesale destruction of the Netherlands by fire, and the consent of the Waterstaat is now necessary before a proprietor may reduce the level of his land by cutting it up into bricks of fuel for the market. Nine-tenths of the polders now drained and cultivated were once bogs and mosses, such as exist in Ireland and in Scotland, but for the most part situated so low that the layers of turf removed, they rapidly became lakes, which irruptions of the inner waters often converted into inland seas. Then came the prevalent gales, heaping up the outer waters, as they often do in the course of a fortnight, 10 and 12 ft. above the highest spring tides known, the narrow rotten causeways protecting these inland seas would be swept away, and the result is visible to-day in the Zuyder Zee, the Lake of Haarlem, and the thousand other polders whose origin may be traced to early ignorance of water engineering, and the use of turf as fuel from a date antecedent to the Christian era.

It must also be remembered as Mr. THURLOW remarks.—That besides the immediate profit to be derived from selling paternal acres by the square inch, the landlord might anticipate a more lasting gain from the fact that the removal of the layer of turf frequently exposed rich alluvial lands, which, when dyked and converted into polders, produced crops of potatoes, rye, clover, and buckwheat in rapid rotation; and this hope, though not always realised, has proved a great incentive to the excavation of peat. In general, bogs or turbaries are known in Holland as "boge" or "lage veenen," that is, situated above or below the level of the waters. The former are naturally the most easily worked, as they may be cut out with a spade at discretion; while the latter require preliminary dyking and draining to let off the water before the fuel can be dug and prepared.

Peat has played a part in Holland second to no other produce of that country; and the Dutch relate with pride that it has had its patriotic as well as its material uses. Their history contains two episodes in support of this assertion. The first occurred in 1593, when the Spaniards had with great difficulty constructed a chaussée to traverse some bog lands. This passage the Dutch had made impracticable for cavalry and artillery by felling trees and laying them across. Of this timber the Spaniards made a bonfire, which communicated to the causeway and surrounding turbaries, compelling the Spaniards to beat a hasty retreat, and thus raising the siege of some important fortresses. On hearing of this disaster, PHILIP II. is reported to have ordered that, "since Holland was combustible, it should be burned to ashes." The second story is that the impregnable town of Breda was occupied by the Spaniards and besieged by the patriots. Winter approached, and one evening a huge canal-boat appeared at one of the water-gates of the city laden with peat. The boat was joyfully admitted by the Spaniards as relieving one of their most pressing wants; the discharge of cargo was postponed till daybreak, but before midnight had tolled the boat-load of turf had proved itself a second Trojan Horse, from whence 80 armed men issued, overcame the guard at one of the gates, and admitted the valiant Prince MAURICE at the head of his army.

These services, besides its properties of giving out heat and light, its ashes affording rich manure, its root being valuable for cleaning pots and pans, and its smoke for preserving fish and meat, have endeared turf to the heart of every peasant as an article of primary importance to the domestic comfort of his daily life. The three northern provinces of Friesland, Drenthe, and Groningen, indubitably owe most of their well-being to their wealth in peat. There the properties of the soil, after exhausting one layer of turf, and reaping splendid crops without manure from the alluvial soil laid bare, often after awhile removes the alluvial soil to some neighbouring sandy waste, discovering under it fresh layers of peat, and still more alluvial soil. The depth to which cultivation is thus carried by successive removals of peat and soil often exceeds 20 ft.; and no truthful estimate can be formed of the original face of nature by the study of the present features of a Netherlands landscape. In these three provinces, but especially in Overijssel, one last phenomenon occurs which calls for some remark. This is the existence, now rare however, on the borders of large lakes, of floating turbaries bits of which may be cut off in strips, according to the width of the canals they have to traverse, and floated down to market. Many legends are told of the embarrassments these floating turbaries have caused. Many a farmer has been

compelled to tether his fields to prevent their floating away; and when unable to keep flocks and herds separate, these fields have been pushed off shore, and anchored at a distance. Then perhaps a storm has suddenly raised the fields have dragged their anchors, and floated out to sea. Such incidents now of rare occurrence, but it would not be difficult to make a collection of authenticated tales of a similar description that would strike astonishment at the sober minds of English husbandmen, as tending to convert the laborious practical profession of a farmer into a life of fable and excitement.

COMMERCIAL CREDIT AND MORALITY.

The Liverpool Chamber of Commerce, in obedience to a requisition held a special meeting on Wednesday, to consider the subject of Bankruptcy Laws, and the laws bearing upon commercial credit and morality, with a view to determine whether it was expedient for the Chamber to take steps towards procuring their amendment. It has happened during the last few years in commercial circles in this country, and in Liverpool in particular, has made it fitting that questions should be discussed in earnest. And it was becoming that this should be done prominently in the Mersey seaport. Mr. GOSCE, the writer of "Two Per Cent." in the current *Edinburgh Review*,—"Look at the failures in Liverpool, and hear the confession of Liverpool—very frankly made—that the whole place has almost cleared out!" But it is not alone in Liverpool, where the "ban win, tails you lose" principle of doing business, which has recently got into vogue, is doing injury to the nation, and cramming our cellars with profitless money. In what large town of Great Britain has not the same been observed? Happily, the mining interest had fewer sufferers than many other interests; still, there are some of our readers who have not suffered from it. The system has been fostered by unwise legislation.

Our Bankruptcy Laws are greatly at fault. They do not lay down the principle that it is *prima facie* a crime to be unable to pay debts. And the extent to which many men have engaged in speculation has demoralised the tone of commercial men themselves upon this point. There must be such an alteration in the law as to prevent the scandal resulting from those "private arrangements," which so many men have recently sought to rid themselves of primary responsibilities, which, in most cases, would never have incurred but for the facilities existing of getting free of them. It is hoped that the meeting in Liverpool will aid in the bringing in an amended Bankruptcy Act next session. The speakers admit that our Bankruptcy Laws are in a most unsatisfactory state, and practically the dishonest trader runs little or no risk for his fraud. The practical result of the gathering at present is that a committee was appointed to consider the subject of the bankruptcy and laws bearing upon commercial credit and morality.

STREET TRAMWAYS FOR LONDON.

Reference was made in the *MINING JOURNAL* of May 11 last to a model of a new system of street and horse tramways in the United States Department at the Paris Exhibition, the invention of Mr. EASTMAN, the United States Consul at Bristol, and, as in the session of Parliament several Bills for providing London with very convenient and economic means of locomotion are to be forwarded, the publication of some further information on the subject cannot fail to be interesting. The great advantage of Mr. EASTMAN's arrangement is that it does not in the slightest degree interfere with the ordinary street traffic, and that it does not permit either ordinary or extraordinary traffic to interfere with it—advantages which are not possessed in combination by any other system which has been proposed. But, before entering upon details of Mr. EASTMAN'S invention, it may be well to give a brief sketch of street tramways generally, the materials for which are conveniently at hand from the pen of Dr. CHARLES MACKAY, the author of "Life and Liberty in America." He observes that among the great cities of the Old and New Worlds, the wealthiest, busiest, and most populous of them all, has the greatest well-deserved reputation of being the worst supplied with the means of locomotion. Its four-wheeled cabs are a disgrace to the municipal regulations, and tolerate them; shabby without and frowny within, with horse drivers of corresponding wretchedness. The two-wheel cabs, or Hansoms, shade better, more respectable to look at, and more comfortable to ride in, with the disadvantage of a clumsy and dangerous contrivance, in the shape of descending windows, which in bad weather is sometimes let down upon the head of the person inside, with unpleasant results to his hat or his head if he happens to be leaning forward in his seat. The only other great city in which the sphere where the omnibuses are as bad as those of London is New York; but that metropolis these vehicles mainly adapt themselves to the wants of one class only—the great spinal thoroughfare called Broadway—and have been superseded by the horse-cars that run on the street railways in all the great arteries and avenues of the city—so that the omnibus nuisance is reduced to the minimum. The omnibus proprietors, however, are as completely unable to make their conveyance what they should be as their passengers are enabled to demand a removal of the inconvenience they are at present subject to, and Dr. MACKAY very truly says, if all the omnibuses which ply in the London streets were constructed of a length sufficient to allow every passenger to be comfortably seated, and of a width sufficient to give easy passage up and down the interior, the passage would be very greatly improved unless the wheels could be brought under the body of the vehicle, as in the construction of railway coaches. This cannot be done without the aid of the rail, unless with the pedicure of horse-power out of all proportion to the result to be attained. The fact is that the omnibus system of London, however much it might be improved, cannot supply the daily increasing wants of the metropolis, and that London is even more deficient in the quantity than in the quality of its locomotion. However great the accommodation from time to time afforded by the wants of the ever-increasing population seem continually to outrun. The main streets are all but blocked up with vehicles of every kind, and if a wide thoroughfare be opened up it speedily becomes as crowded as the narrow streets, without seeming to divert from the old channels any perceptible portion of the great stream of human and animal life that flows into the city out of it like blood from the heart. Even the Metropolitan and Underground Railways—the greatest boon, notwithstanding the serious drawbacks and disadvantages attendant upon it, which has yet been conferred upon the public—has neither diminished, to any appreciable extent, the above-mentioned traffic, or provided completely for the public necessities. The only objection to this railway consists in the fact that it is underground, and that, however the care and pains that may be employed to keep it pure and well ventilated, will always be avoided by timid and delicate people, as well as by that class who love fresh air, daylight, and the life and bustle of the streets. This leads to the necessity of establishing in the metropolis the same system of locomotion which has been introduced with such singular success in such great public advantage in all the great cities of the United States—Canada—the system of street railways—for the conveyance of the multitude of large and commodious cars drawn by horses. This is the sole available remedy for the evils and defects of the existing London system, and cannot fail to be adopted as soon as public opinion is sufficiently enlightened upon the subject, when, as is the case with all great improvements, the wonder will be, not that it was not introduced long ago, but that it was not introduced so long ago.

When Mr. G. F. TRAIN provided tramways at Westminster, Lambeth, and the Notting-hill-road the comfort secured to travellers by the street car system was acknowledged by thousands, and it is beyond question that by the public the change was looked upon with the greatest possible satisfaction. Unfortunately, the form of the rail and wheels used afforded a ground of complaint which those who conceived their interests to be interfered with by improvement were too ready to take hold of. That the inconvenience to general traffic arising from the rail was greatly exaggerated cannot be doubted, but, on the other hand, the rail and wheels were certainly capable of being made more perfect in the interest both of the car-proprietors and the public. As an evidence of this it is but necessary to refer to a journey made on the Notting-hill line within an hour of its opening to the public. A friend of Mr. BEAUFORD HOPE'S, entrusted with the removal of a cart-load of manure, was seated with a fit of obstinacy, and determined upon Mr. TRAIN'S tramway as the most convenient place to give vent to his feelings. The effect was complete. Mr. TRAIN had no power to pass round the obstruction, since it would have been inconvenient for him as for a locomotive to leave the rails, and the consequence was that, threats and entreaties being alike unheeded by the party of the cars could not proceed, and the passengers were compelled to prevent further waste of time on the part of the ignorant carman. The difficulties which Mr. EASTMAN'S rail and wheels (for it must be remembered that however good a rail may be, it is worthless for street use without suitable wheels) present for running in and out of the track would effectually prevent any such annoyance as this, since the sole effect of a similar display of obstinacy towards Mr. EASTMAN would be to cause him to draw out of the track and pass round him, which would not delay him ten seconds. The one objection raised in London against the introduction of the tramway system is completely answered by Dr. MACKAY, when he observes—"It is all very well," to claim the omnibus proprietors and the people in their interest, "to tell us of the advantages of the tramway in the wide, straight, and level thoroughfares and avenues of the cities of the New World; but in our crooked and narrow streets it would be impossible to introduce the same system." Such, however, is the case. It is not intended to lay down tramways in narrow streets; but it were there would be no more difficulty in the matter in England than in America. The theory may sound well—and may read well, too—but the North American continent is Notre Dame-street, in Montreal, which is 20 feet wide, on the average, between the foot-paths. Yet the rail is laid down, at short intervals, from early morning till night, without causing any obstruction to the other traffic. In Quebec the rails are laid in a street only 17½ ft. wide, and with no inconvenience to anyone. Dr. MACKAY gives many other equally conclusive examples of narrow streets being successfully laid with tramways, but these will more than suffice.

The report of the engineers of Paris upon Mr. EASTMAN'S system, made in order of the Prefect of the Seine, is most satisfactory, the result being that the proposed to establish, at the expense of the city, and with the concurrence of the inventor, a double track of his new system on the quays of the left bank, from the Bridge du Carrousel to the Champ de Mars. Mr. EASTMAN'S rails have a

have form, the segment of the circle that represents their concavity being four inches, and half-an-inch at its greatest depth. Any carriage having the breadth of track of the rails can run in their grooves, or pass in or out across them without difficulty. The breadth of these grooves is too small to allow the feet of the horses to be entangled, or catch in them, and their depth is so slight that the wheels can easily turn out. The rails are strengthened beneath by a flange, which holds them by a broom (or plough) fixed to the carriages in front of the wheels. Their cost is less than that of ordinary rails (as they may be made lighter, and their position is beneath the surface, and not subject to side strains). Cast-iron may sometimes be substituted. The carriages of Mr. EASTMAN's system have wheels with a convex edge, of a smaller radius than that of the concavity of the rails. The friction surface is thus very small, and the friction much reduced. The axles are united by connecting rods, that so act upon each other as to place themselves always exactly in the curves (or the arcs) of the radiating lines from the centre of the circle that is described by the wheels. The hind wheels thus follow exactly the tracks of the front by the wheels, and the carriages will turn with facility and safety in curves of a very small radius. The carriages may also run on any other road as well as ordinary carriages. They have their bodies very near the ground, so that persons may get in and out without difficulty. The carriages are also spacious, light, and comfortable.

The striking contrast between the proposition made by Mr. EASTMAN, to which reference is made above, and those of all other persons who have sought to give the inhabitants of large towns the advantage of street tramways, is that Mr. EASTMAN proposes only to furnish an iron rail or road for the public use, which may be utilised by common carriages, and thus prevent the monopoly or exclusiveness of a street railway, by individuals or a corporation, allowing no privilege in the mechanical construction which cannot be used in common. Mr. EASTMAN asks no concession for himself or for his friends, and is entirely unconnected with any company or combination. These are circumstances which cannot be too carefully kept in view, for it must be admitted that the old street railway system is a certain extent a nuisance, and there are many who consider that the tramway companies, who bills will shortly be before Parliament, will, in the event of success, be entitled to credit rather for the zeal with which they have worked to conquer prejudice than for the ingenuity displayed in the mechanical arrangements they propose to introduce. Taking all these facts into consideration, it becomes a matter for serious question whether it would not be better to give the Metropolitan Board of Works power to insist upon the laying of tramways, which shall be available to all who think fit to use them, than to grant monopoly to separate companies, in such a manner as practically to confine the use of the rails to one particular kind of wheel, which it could not be hoped would come into general use for ordinary traffic.

MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,

Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

The "cry is still they come." Patents relating to steel still crowd the list of applications. The importance of the subject is continuously manifested by this practical evidence of industrial consideration.

The recent list of specifications comprises a patent of Mr. H. K. YORK, of Grange Town Ironworks, Cardiff, for improvements in the manufacture of steel. According to his specification, his invention has for its object the manufacture of steel from cast-iron, by fusing a mixture composed of iron, purified and decarburised, and a certain proportion of cast-iron, containing carbon, or carbon and manganese, which is commonly known as spiegel-iron.

The recent specifications include one of Mr. JOHN H. JOHNSON, of Lincoln's Inn-fields, for improvements in rolling and shaping metals, and in the machinery or apparatus employed therein. This is a communication to him from U. Petin and J. M. Gaudet, of the celebrated firm of Petin, Gaudet, and Company, Ironmasters, of Paris, and the Gier, in France. This invention relates to a peculiar combination and arrangement of rolling-mill for rolling cross-shaped and other forms of pillars, girders, or bars. In this invention four rolls are employed, of any desired form, according to the shape of the article to be produced. The top and bottom rolls are driven in the usual or other convenient manner, whilst the other pair of rolls revolve horizontally, and they are disposed on each side of the central vertical plane, which passes transversely through the top and bottom rolls, and are rotated solely by frictional contact with the metal to be rolled. After each passage of the metal the top roll and the two horizontal rolls are moved inwards slightly, by means of powerful adjusting screws or other mechanical contrivances, so as to nip the metal equally on all four opposite sides.

Gold rarely forms the subject of Letters Patent, although it is (and naturally so) very frequently their object. However, Mr. F. B. MILLER, an assayer of New South Wales, has recently specified a patent which relates to this auriferous subject. The title is an improved method of toughening British gold bullion, or refining alloyed gold, and separating therefrom any silver it may contain. In his specification the patentee proposes to effect his desirable object by the employment of chlorine gas or hydrochloric acid gas, applied in such manner that it shall rise up amongst and through the alloyed gold in a molten condition, by which means the chlorides of silver and the chlorides of any other metals of base order which may be present, will be formed and will rise to the surface of the melted mass, while the gold will remain beneath in a purified and tough condition.

COAL IN ITALY.—In spite of the assertions to the contrary of many geologists, it is now fully proved that Italy possesses many deposits of coal and lignite, some of which are at present explored with most satisfactory results. Among these may be mentioned the mines of Borgotaro, situated in the valley of the River Taro, in Parma. The quality of coal obtained from these mines is excellent. From experiments that have lately been made at the Milan Gasworks with Borgotaro coal, 24 cubic metres of gas per quintal of coal were obtained (847.60 cubic feet per 1 cwt. 3 qrs. 24 lbs.). But the gas produced was of little illuminating power, and the coal gave little or no coke for tar. A second experiment with coal from the same pit, but obtained at a greater depth, gave most satisfactory results. With this coal, which resembles Cannel, a gas with an illuminating power of 25 per cent. superior to that at present used at Milan was obtained, and producing 52 per cent. of good saleable coke. The quantity of gas produced per quintal of coal was 24 cubic metres. From the geological aspect of the Apennines, and the analysis made of its coal, it may be justly supposed that the deposits of mineral fuel are most extensively and deep. The construction of the proposed railway from Parma to Chiavari, in the valley of the Taro, will contribute greatly to the development of coal mining in the Apennines, and will tend to diminish, to a great extent, the immense tribute which the Italians pay to foreign countries for fuel only.

COAL IN AMERICA.—The total production of anthracite coal in the United States during 1867 is estimated at 12,790,000 tons, an increase of 250 tons over the yield of 1866: 214,000 tons of coal, mainly Cannel, were imported from Great Britain during 1867.

MINERAL TRAFFIC ON RAILWAYS.—In 1862 the railways of the United Kingdom carried 63,405,864 tons of coal, coke, and minerals; in 1863, 68,043,154 tons; in 1864, 75,445,781 tons; in 1865, 77,805,786 tons; and in 1866, 85,483,444 tons, showing an increase in five years of no less than 22,077,580 tons. The revenue derived by British railways from mineral traffic stood in 1862 at £4,957,406; in 1863, at £5,419,667; in 1864, at £6,302,888; in 1865, at £6,469,502; and in 1866, at £7,074,923. The mineral traffic of the 14 leading railways of England, Wales, and Scotland was as follows, in 1866:—Caledonian, 5,691,129 tons; Glasgow and South-Western, 2,755,305 tons; Great Eastern, 1,010,173 tons; Great Northern, 2,391,007 tons; Great Western, 6,012,211 tons; Lancashire and Yorkshire, 4,531,620 tons; London and North-Western, 11,331,103 tons; London and South-Western, 493,805 tons; London, Brighton, and South Coast, 629,627 tons; Manchester, Sheffield, and Lincolnshire, 2,460,866 tons; Midland, 5,983,873 tons; North-Eastern, 15,813,619 tons; North British, 4,118,943 tons; and South-Eastern, 236,992 tons. The system which enjoys the finest mineral traffic is thus the North-Eastern, which comprises the old Stockton and Darlington, West Hartlepool, and Newcastle and Carlisle Railways.

TRINIDAD BITUMEN, AND CHEAP GAS.—Although numerous attempts have from time to time been made to turn to commercial advantage the immense deposits of bitumen or mineral pitch which the island of Trinidad possesses, comparatively little has yet been done without success being made dependent upon the results of untried processes. Many of these were, doubtless, capable of being perfected by the expenditure of the necessary time and capital, and would ultimately have returned ample to compensate for the outlay; want of patience, however, on the part of the capitalists has caused one proposition after another to be abandoned; and many have, in consequence, been inclined to pronounce all suggestions for the utilisation, upon a large scale, of the Trinidad bitumen hopeless. But it now seems that so far from special processes being necessary in order to give this substance a commercial value, it is capable of application in the production of an article which is indispensable to the supply of our daily wants—cheap gas. Mr. ARTHUR A. COCHRANE, of Westminster, has succeeded in obtaining excellent results, by employing it as a substitute for Boghead Cannel; he has obtained a gas of equal illuminating power and in quantities which will make its use far more economic than that of the mineral it is proposed to replace. Before applying to the War Office Mr. COCHRANE made a long series of trials with the Trinidad bitumen, mixed with coal, in the gas reports, for the purpose of increasing the illuminating power of coal

gas, for which purpose Boghead mineral is usually employed. The results were so satisfactory that the War Office ordered 200 tons of bitumen for the use of the gasworks. The common bitumen from the lake, when mixed at the rate of 15 per cent. of bitumen with 85 per cent. of Whitworth coals, gave about 12 per cent. less in quantity than Boghead and coal mixed in the same proportions, but was of equal illuminating power—16-candle gas. The price of bitumen is estimated to be, delivered in the Thames, from 30 to 40 per cent. lower than that of the Boghead Cannel. It is said that to obtain 19 and 20-candle gas requires 25 per cent. of bitumen, mixed with 75 per cent. of Whitworth coal, which of itself gives 13½-candle gas. Boghead and coal, when mixed in the same proportions as above stated, give a result of 12 per cent. in favour of the Boghead mixture, and an additional illuminating power of 2½ candles. Other qualities of bitumen afford even better results than the common lake bitumen. It is well known that Boghead mineral gives the largest results, both for quantity and quality of gas, and, therefore, there was an advantage in comparing the bitumen with the highest standard. The application now proposed has been patented by Messrs. COCHRANE and UPWARD, the admixture being the novelty claimed. The late Earl of DUNDONALD carried out a series of trials to utilise the bitumen *per se* to make gas, but the admixture of bitumen with coal offers much greater advantages.

REPORT FROM SCOTLAND.

JAN. 29.—The Pig Iron market has advanced about 6d. a ton since last report, with a firm market, but not much business doing. Warrants are scarce, on account of a number of contracts having been called up, and speculators are reaping any profit that is going. Makers' iron is decidedly dull, and the tendency—so far as manifested—is to lower prices for pigs. This is keeping Middlesborough iron out of the market for the time, and will help the demand here. The shipments are not, however, very cheering, being under the corresponding week of last year in the proportion of, for the week ended yesterday this year, 5740 tons; last year, 6040 tons. Of the Monkland and Chapelhall furnaces seven were blown out last week, but have since been re-lighted, and two additional furnaces have been blown in at Glengarnock, in Ayrshire, but iron cannot be profitably made at some of the works at present prices. To-day a large business was done at 52s. 6d. down to 52s. 3d. cash and a month fixed, and one transaction at 52s. 8d. and a month open, closing nominally at the lowest: g.m.b. No. 1, 52s. 9d.; No. 3, 51s. 9d.; Gartsherrie and Coltness, 57s. 6d.; Glengarnock, 56s. Manufactured iron is not improving in demand, so far as merchant bar is concerned, and although second-class makers quote generally from 67. 15s. to 67. 17s. 6d., orders are being taken at a reduction of 2s. 6d. from these prices to secure trade. This will lead to a reduction in the wages of millmen and puddlers, but the trade here are waiting for the movement of one large firm in that direction, when they will all immediately follow. Shipbuilding iron keeps in improved demand, and the prospects for makers of this description of iron are very good. Angle iron is presently quoted at 77. 2s. 6d. to 87. 10s.; plates, 87. to 107. All the first-class brands of bars are now quoted at 77. The ironmoulders connected with the Union having refused to work with non-Union men, the Masters' Association met, and have unanimously resolved:—"That notice be given to Union moulders that on and after Feb. 1 their services will be dispensed with, until the directors have it in their power to intimate that all shops in the trade that are still struck or shut by the moulders' Union have been opened, free of all restrictions." They further resolved, that if necessary they will order a general lock-out till these terms are complied with; there are fears that this will be the upshot of the resolution. Coals meet with an average demand for shipment, but the home enquiry is still limited, and prices are weak. To lead to business, the usual discounts have, in some instances, been doubled, and in others much augmented, but with no better effect than that of accumulating stocks away from pits, as there is not a consumptive demand for the article. In some districts the men are restricting their output, so as to lessen the supply, but this is making no perceptible change in the absence of demand. From the Scotch ports 17,260 tons were sent by sea, against 16,775 tons in the corresponding week last year; but we regret to learn that not a few of those cargoes are going into stock in the ports to which they have been consigned. The colliers are at a loss what to do with the proposed reductions—how are matters to be made better? Can a strike effect any beneficial change?

REPORT FROM MONMOUTH AND SOUTH WALES.

JAN. 30.—The Iron Trade of this district, although in no way improved since last report, cannot be said to be in a worse position than it has been for some weeks past. As the quarter progressed, makers anticipated that the unsatisfactory position of the trade would be greatly modified, but such has not been realised, as dulness and want of animation prevails throughout the whole district. At several of the works the men in some branches are not employed more than half-time, while in others there is a little more activity evinced than at the commencement of the quarter. The unfavourable reports received from the other iron-producing districts are not without their effect on the iron trade of this district, irrespective of the increased competition they cause for the orders offered. At some of the establishments attention is being paid to the manufacture of tyres, chains, and other miscellaneous descriptions, and it is not improbable that ultimately the district will not depend so much on the rail trade as it has hitherto done. The reduction in wages having been carried out, a saving will be effected in the cost of producing iron, and manufacturers will now be enabled to compete for many contracts they have hitherto been prevented from doing, unless they felt disposed to undertake the execution of orders they well knew would entail a positive loss. Although no improvement has taken place, makers generally believe that the worst time has been seen, and there is evidently a more cheerful tone prevailing than for some time past. Public confidence in railway securities is being gradually restored, and this will undoubtedly place the home railway securities in a position to make the purchase of rails and other materials they so much require. There are a few shipments to be made to the United States, and should no political contentions arise in that country to interfere with commercial enterprise, some large orders will, no doubt, be speedily sent to the makers in this district, as there are some hundreds of railway mileage requiring re-laying, and which will be done in the ensuing spring. Enquiries from the Continent are not numerous, but there is an expectation of an increase, as there is no probability of a war taking place. The contemplated extensive railways in Russia, Prussia, and Hungary inspire hopes in makers' minds, as there will be a large demand for iron if the schemes are carried out. For Pig-Iron the demand has slightly increased, and future prospects are considered encouraging. Tin-Plates are in better request, and it is believed that prices have touched their lowest. The Steam Coal Trade is not quite so brisk as it has been, but this is mainly owing to the unfavourable weather which has prevailed, and retarded shipping operations, and not to any material falling off in the demand. Proprietors generally are tolerably well off for orders, but prices are low, and there is no prospect of an immediate improvement. The House Coal Trade is dull, and the purchases of West of England and Irish houses are below the average.

The Ebbw Vale Company (Limited) have notified that they have made arrangements whereby the call of 27. 10s. per share, which was contemplated in February next, will not be required. They also state that, although the iron trade is worse than at any time for 25 years, the company have earned a small profit for the six months ended in September last, while the December quarter shows a similar result, but that, owing to the continued depression in the trade, it is considered advisable to defer declaring a dividend for the present. The directors are taking counsel's opinion as to the best course to be pursued to carry out the proposed reduction of the nominal amount of the capital.

The wages question cannot be said to be yet settled in this district, although there is no fear from the disposition shown by the men of a strike taking place. During the past week meetings of colliers, miners, and ironworkers have been held at Merthyr, Dowlais, Aberdare, Rhondda Valley, and other places, and at all these gatherings it was admitted that the extreme depression which prevailed in the iron and coal trades, more especially the former, fully justified the employers in making some reduction, but 15 per cent. was considered an unusually heavy drop. It was urged that masters ought to be satisfied with reducing the wages scale 10 per cent., for that would enable them to very materially reduce the cost of producing either coal or iron. At two or three of the meetings an opinion was expressed that the hands should not submit to a drop of more than 7½ per cent. Deputations have been appointed at

the principal works to confer with the masters, and it is not improbable that the latter may, perhaps, average prices, so that the reduction may range from 12 to 13 per cent.

A month's notice has been given to all the hands employed at the Beaufort and Nant-y-Glo Works, which belong to Messrs. J. and C. Bailey. The proceeding has caused much surprise, and it is feared that the establishments are to be altogether stopped.

The Hendy Tin-Plate Works, near Lloughor, although not quite completed, have during the past ten days been in active operation, and a large number of men are employed. The works, which were projected by owners of splinter works in Birmingham and Gloucester, are fitted up in the most modern style, and the most improved machinery has been constructed, by local engineers. New splinter works have been just constructed in Llandovery and other places, near Swansea, which proves that these branches of trade are by no means so depressed as many others.

Messrs. Jones, Lewis, and Williams, proprietors of the Coedcae Colliery, Rhondda Valley, gave a dinner on Saturday to the whole of their employees. In previous reports reference has been made to the misunderstanding which existed between the colliers and the contractor, and the disgraceful scenes which ensued, the result being the committal of several of the colliers for trial at the ensuing Assizes for riot and attempted murder. Upwards of 200 men and boys sat down to dinner, which was intended as a reconciliation between the two parties, the proceedings passing off in a very amicable and decorous manner. During the evening a great many toasts were drunk, and some neat speeches were made, in which the masters and men expressed their deep regret for all that had occurred in the district, and determined to entertain sincere friendship for each other in future.

Mr. Leybourne, for many years superintendent of the locomotive department of the Monmouthshire Railway and Canal Company, has been appointed manager at the Rhymney Ironworks. Mr. Leybourne has succeeded in winning the good opinion of the employees engaged at the railway works, and his departure is much regretted by all under his command.

REPORT FROM THE FOREST OF DEAN.

JAN. 29.—The sale of the Bowson Colliery came off on the 23d inst. There were present about 30 gentlemen, amongst whom we observed Mr. O'Barrett, Messrs. Gould and Hayworth, Mr. Thos. Bennett Brain, Mr. Thomas Foster Brown, the Deputy Gavelier, and the Crown Receiver, who were there to watch the proceedings on behalf of the Government. Mr. Bruton, the auctioneer, introduced the property to the notice of the company by a lucid statement of the circumstances under which the colliery was offered for sale. Mr. M. F. Carter, solicitor, read a notice setting forth certain claims which the Bilson Coal Company conceive they are entitled to, in consequence of the inflow of water into their works from the Bowson Colliery. Mr. J. Lovegrove, acting on behalf of the latter company, deprecated the course taken by the Bilson Company, in giving notice without previously furnishing a copy of it to his clients, when he had some very useful observations, reflecting on the conduct of Mr. Carter, who explained that he was not instructed to give notice, but to read it; he was quite willing, however, to furnish him with a copy, and would have done so, but was informed no solicitor would be present representing the Bowson Company. At this point Mr. A. Gould intimated that he had a copy, which Mr. Carter handed to the auctioneer. After various observations from a shareholder, who attempted to show that the notice was given with an intention to damage the property, the auctioneer proceeded with the description of the colliery then offered for sale, and asked if any gentleman present would favour him with a bidding, which enquiry was often repeated, but there was no response; and, as no offer was made, the auctioneer announced that it would be open for sale by private treaty.

The men at Messrs. Russel's forge have now fairly settled to work on the reduced scale of wages, and we are happy to state that no apprehension is entertained of a reduction taking place at any of the other works in the district. All the blast-furnaces are in full operation, and there are an average number of orders on hand. The blast-furnaces at Sewdley, the property of Messrs. Gould Brothers, are not progressing well, in consequence of not having a sufficient and constant supply of minerals and other materials for the furnace. There are a few very valuable iron mines near at hand, and it is a great pity the firm do not avail themselves of the opportunity of purchasing and developing such a mine, from whence they could obtain a supply of ore for smelting operations.

Some few days ago a serious accident occurred at the Findall Iron Mine Works, the property of the Dean Forest Iron Company. It appears that while one of the men—Thomas Cooper—was in the act of ramming down the powder which had been placed in a hole already bored, it became ignited, but fortunately the piece of rock did not come away, otherwise two or three lives must have been lost. Every attention was paid to poor Cooper, and we are pleased to say he is in a fair way to recover. His sight was supposed to be lost at the time of the accident, but it is gratifying to know that this is not the case.

A fatal accident occurred at the Bowson Colliery, by which a poor man lost his life, on the 15th inst. The evidence adduced disclosed that Edward Hooper, the deceased, went down the shaft about 10 o'clock at night, and had returned two or three times in safety, but on coming up at 12 o'clock the engineman pulled him right over the wheel, dashing him against the framework, by which his skull was broken. In addition to this, he was hurled a distance of many yards into an ash-pit, where, of course, he was found quite dead. The workmen lost no time in taking him home, which duty they performed with agitated minds and sorrowful hearts. An inquest was held at the Globe Inn, Cinderford, before Mr. J. Lovegrove, the coroner; and a respectable jury, who investigated the case, returned a verdict of "manslaughter" against William Jordan, the engineman, who was, upon the coroner's warrant, committed. The witnesses examined were W. Burdies, the manager, Thomas Jordan, bankman, James Baldwin, who worked with the deceased in the pit, and G. Cooper, who gave evidence as to the working of signals, &c. The prisoner was on Monday last taken before the Rev. C. E. Dighton and Sir T. Crawley Bovey, the sitting magistrates, at Mitcheldean, and finally committed to take his trial at the next Gloucester Assizes on the charge of manslaughter, but admitted to bail in 100l., himself in 50l., and C. Brain Drybrook in 50l.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

JAN. 30.—The dispute in South Derbyshire, which has lasted upwards of eleven months, is now all but closed, and the men who endeavoured to enforce the Union and its rules at all the collieries, owing to the determination of the masters, have been signally defeated. To the masters the loss has, no doubt, been serious, but it has been far more serious with the workmen and their families, who have suffered great privations. During the past week this district, including Gresley, Swadlincote, and Newhall, has been in a state of fermentation, in consequence of several outrages having taken place. Owing to the introduction of a large number of men from Staffordshire and other places, as well as from the return of some of the old hands, the pits have got nearly full handed, and the hands out, seeing that they were defeated, commenced the work of outrage and intimidation. Several of the men have been assaulted, and bricks thrown through the windows of the houses occupied by them. The road from the station and those leading to the collieries are watched by pickets, and every person at all in working garb is narrowly watched. So serious have some of the acts of the men been that the proprietors have offered a reward of twenty guineas in one instance for such information as would lead to the apprehension of some men who seriously assaulted Thomas Lea, a collier working at Church Gresley. The men out are still in receipt of pay, principally from the South Yorkshire Miners' Association, but it is evident that the closing scene is at hand, and that no inconsiderable number of the men who were once comfortable, and well and profitably employed, will have to go into other districts if they require work, for they cannot expect to be supported much longer, now that there is no chance of obtaining what they struck for, and as their working places are all filled. There is very little alteration in the Iron Trade, although there has been some activity at Staveley, where a heavy quantity of pipes has been turned out on Government account. Bars, rails, and hoops are quiet, but most of the furnaces continue in blast, and at some of the works there are very heavy stocks of pig on hand.

In Coal, there is a fair business being done to London in household qualities; gas coal is also in fair request for Birmingham, Worcester, and other places in the Western and Midland districts. Several new collieries are being opened out in North Derbyshire, and on Thursday evening last the winning of the coal by the Wingerworth Company, at the New Holmwood Colliery, was duly inaugurated. The shaft, which is sunk to a depth of 63 yards, was bottomed in about seven months. The coal, which is of very good quality, is about 4 ft. 9 in. thick. The Duke of Devonshire, who is one of the largest owners of minerals in the county, is the lessor.

Most of the Sheffield trades continue quiet, and there is just now very encouraging signs of improvement. The works in the neighbourhood of Rotherham are once more in operation, but in some of the branches the men are only partially employed. At Milton and Elsecar the puddlers and millmen remain out, and the works all but closed. Many of the men are desirous of accepting the terms offered, but there are others who, in receipt of weekly pay from the Union, do not show a disposition to go in, so that all remain out, the non-Unionists suffering a good deal of privation.

There is no improvement to notice in the state of the South Yorkshire Coal Trade, which remains very dull indeed for the time of year, and there is some talk of a reduction of colliers' wages. To London and the South there is by no means anything like the tonnage being forwarded as is usual at this season, either in the Barnsley or Silkstone seams. There is, however, rather more doing into Lancaster by the Manchester, Sheffield, and Lincolnshire Railway, owing to a dispute in the Ashton district, the colliers being out on strike against a proposed reduction of wages. For Grimby and Hull there is only a moderate business being done, and several contracts entered into during the past week have been taken at a reduction from late rates, owing to the compe-

tion with other districts. There is no change with regard to coke, most of the furnaces in the district and on the Trent being in blast.

DERBYSHIRE COAL AND IRON TRADES.

DEVELOPMENT OF MINERAL WEALTH BY THE MIDLAND RAILWAY.

The various extensions now in course of construction by the Midland Company for the purpose of completing their system appear not to have that importance attached to them as really profitable investments which they deserve. Attention, so far, has been mainly directed to the probable actual cost over the first estimates, whilst the returns which may be expected on the very large capital laid out has, to a considerable extent, been overlooked. Such being the case, a notice of some of the principal branches now fast verging towards completion may be the means of giving some idea of their value, so soon as they are brought into work. Amongst the most important may be named the direct line from Sheffield to Chesterfield, and which gives every promise of being one of the most important branches, in a pecuniary point of view, of which the Midland can boast. For a short line, of some 14 or 15 miles in length, it is questionable whether there is anything showing a better prospect of paying a very large dividend on the amount of capital which there has been expended upon it. On its route ironworks and collieries are in course of formation and sinking, in addition to those already in working operation, and which have so long been awaiting an outlet for their produce. At Dromfield, midway between the two towns, not only will the minerals be developed, but large additional works are to be erected by the Messrs. Lucas, the oldest firm connected with the iron trade in the district. So far back as 1791, S. and A. Lucas took out a patent for making small castings, comprising useful and fancy articles of various descriptions, by melting ordinary pig in crucibles until it became as fluid as water, and then running it into delicately formed moulds. The system has since then become general. Close to the works alluded to is the Unstone Valley, rich in ironstone and coal, which are now in course of development, the West Staveley Company being at present engaged in sinking to the black shale, whilst some very extensive ironworks are projected. From this point to Whittington and Sheepbridge there promises to be one unbroken line of works of various kinds, all of which will, there is no doubt, be dependent on the line for the disposal of their produce with the railway facilities which will be thus afforded, and with the works already in operation and about to be opened out, and a country teeming with mineral wealth, of the advantages of which capitalists are now fully aware, the line cannot fail of being a great success. The branch line from Cudworth to Barnsley, which will shortly be opened to within a mile or less of the last-named town, will also run through a fine mineral district, and already one of the largest collieries in Yorkshire is being opened out on its route by Messrs. Day and Co., this branch cannot fail of being remunerative, seeing that in addition to its mineral traffic it has the conveyance of mails to and from London and other places to Barnsley and the North.

The extension of the line to London, however, cannot fail, with the main arteries and branches in full working order, to add immensely to the revenue of the company in minerals alone. To those at all acquainted with the Derbyshire coal field this will be apparent, and easy of proof by reference to the returns of the quantity of coal carried into London by railway for the year 1867. The district through which the Midland alone passes supplies fully two-fifths of all the coal carried into London by railway, which last year was 3,295,652 tons. Of that quantity the London and North-Western carried 1,243,330 tons; Great Northern, 1,641,125 tons; Great Western, 425,715 tons; Great Eastern, 385,432 tons; and the Midland, 157,246 tons only. From Clay Cross, on to the main line, were sent more than one-tenth of the entire quantity carried by railway, yet the Midland only carried 125 tons, whilst the London and North-Western carried 187,512 tons, the Great Northern 72,758 tons, and the Great Eastern 47,889 tons. Now, with sufficient rolling stock, and a straight run into London, there is no reason why the Midland should not carry out at least 1,250,000 tons of coal annually from Derbyshire to the metropolis, instead of 157,000 tons. The gross amount for the carriage of such a quantity could not be less than 500,000l. at the present rates. In addition to the foregoing figures, it may be stated that the collieries now being opened out on the line lead to an increased tonnage at the rate of at least 750,000 tons per annum, all of which will have to be transported by railway. With these facts in view, the great power the Midland has within itself may be gathered, and the vast revenue it is capable of obtaining from its mineral traffic, for the development of which every facility should be afforded. They will also show the high position the Midland is ultimately destined to attain, and the bright future that is in prospect for the shareholders, as the line will, doubtless, become one of the best and safest for investing in, notwithstanding the ordeal it has recently gone through.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JAN. 30.—There is no change to notice in the Iron Trade of this county. Orders are scarce, numbers are out of work, and much larger numbers are pinched by the poverty that comes of only partial wages. North Staffordshire is in hardly so bad a state as South, but both are in a condition of great depression. The failure of Mrs. Gibbons, of the Millfields Furnaces, was announced last Friday. Pressure by the liquidators of the Birmingham Bank was the immediate cause. Mr. Benjamin Gibbons died about three years ago. The liabilities are, it is said, about 40,000l. The assets are considerable. Messrs. George Barlow and Co., of Moat-row, Smithfield, Birmingham, iron, steel, and tin-plate merchants, have stopped payment. The liabilities are 67,400l., and the deficiency 36,692l. An offer to pay 7s. 6d. in 12. has been conditionally accepted by the creditors. Mr. Finsley, a very large nail factor, has given notice to reduce prices 20 per cent., alleging the state of the trade as the reason. This trade has long been specially poor, and the earnings very small; and this last blow seems to strike despair into all hearts. Several other firms have given notice of a reduction of 10 per cent. The *Birmingham Gazette* states that Messrs. H. and R. J. Moser, of London, are working a patent by a Mr. Huggitt for making horse-shoe nails by machinery. The nails are made of best Swedish iron. The attempts to make horse-shoe nails by machinery have been very numerous. The late Mr. Joseph Hall, who did so much to improve the manufacture of iron, made some efforts to roll these nails, and the writer has seen some he so produced; but he was never able to carry out the invention to perfection, from his attention being otherwise directed.

Two chartermasters, Jabez Broad and James Clayton, were charged by Mr. Meir, proprietor of the Tunstall Colliery, with neglecting to carry out their contract to get the Little Row coal. The defendants called Mr. Wynne, the Government Inspector of Mines, who gave it as his decided opinion that from the way in which the pit was laid out it was dangerous, on account of the want of ventilation, to go to the end of the working. He also said the timber supplied was very bad. The magistrates dismissed the case, on the ground that the bench could not direct the men to go to work where Mr. Wynne had said their lives were in danger.

Amidst the general wreck of joint-stock enterprise it is gratifying to find that some have been, and continue, successful. The Rolling-Stock Company, which is located at Wolverhampton, goes on as prosperously as ever. At the half-yearly meeting, on Tuesday, the usual dividend at the rate of 11 per cent. was declared.

REPORT FROM NORTHUMBERLAND AND DURHAM.

JAN. 30.—The Iron Trade—that is, manufactured iron—continues to be characterised by dullness, and reduction in the price of labour is still the order of the day. A reduction has been made in wages at Hawk's Works, Gateshead. Some little stop was made by the men, on account of the proposed reduction, which amounted to 1s. per ton on one class of work, and 9d. per ton on another, but an amicable arrangement was arrived at, by making the reduction of 6d. per ton in one case and 4½d. per ton in the other. The rollers and others struck work at Abbot's during last week, in consequence of a proposed reduction in the prices there also, and those mills are, up to this time, idle in consequence. The men have offered to go in on similar terms to those at Hawk's, but as yet the masters have not complied, and so the matter stands.

The usual weekly meeting of the Iron Trade was held on Tuesday, at Middlesbrough. There was a large attendance of gentlemen connected with the trade from Newcastle, Darlington, and other places. The proposed reduction of the wages of blast-furnacemen was freely canvassed, and it was stated by Mr. H. Bell, of the firm of Bell Brothers, of Port Clarence, that they had agreed with their men. They had given the men notice of a reduction of 10 per cent., and on their refusal to accept this the furnaces were damped down, and on the men seeing this they accepted the terms offered. Next Saturday the notices of a similar reduction expire at Bolekew, Vaughan, and Co., and at Messrs. Cochrane's Works. It appears that a more cheerful tone was shown in the Pig-Iron Market, and the prices were—No. 1, 46s. 6d.; No. 3, 43s. 6d.; No. 4, 42s. 6d., f.o.b. The stock now in store is 70,645 tons. Since the 21st 1413 tons have been received for warrants; stocks are increasing. Some enquiry was made about Mr. Jones's process of making steel of Cleveland iron, and one of the firm of Fox, Head, and Co. stated that they expected soon to be ready to make large ingots of cast-steel, after which rails would be made and tested.

The water has been got out of the Shank House Pit, so far as to enable the men to reach the seam, and the drainage of the latter is now going on rapidly, so that the drawing of coals may be expected to be resumed there shortly.

A strike has been going on for some time at the extensive chemical works of Messrs. Allhusen, the cause being a proposed reduction in the rate of wages. A number of men have been brought from London and other

places, and by this means Messrs. Allhusen have endeavoured to keep the works going, but the usual means (bribery and intimidation) have been freely resorted to by the Union men, and the strangers have in many cases been persuaded by the Union men to leave the works, and money has been given them to enable them to get away from the district. Several of the men were, however, brought up at the Gateshead Court on Tuesday, and convicted in each case, but on engaging to return to their work they were not sent to prison.

STRIKES, AND HOW TO PREVENT THEM.—On Monday and Tuesday evenings the addresses of the competitors for the prizes offered for the best speeches on this subject were given in the Town Hall, Newcastle. The first prize was awarded to Mr. Beckwith, of Ouseburn, who really gave a very good short essay on this most vexed subject. He did not believe that arbitration would prevent strikes, neither would any amount of education cure the evil, as the masters, who are generally well educated, do not always act right. He believed that co-operation was a step in the right direction. Those are not simple partnerships, otherwise there would be disputes as to whether labour or capital got a fair share of the profits. The opponents of this system say that owners will not open their works to the workmen for them to throw in their capital; but the working men have the remedy in their own hands. They can open co-operative works of their own, and that would bring the employers to their senses. Supposing a case where 5000 men were employed; a shilling per week might be saved by each man, and this would produce in four years 60,000l., and this sum could be invested in works. This is only a short abstract of the contents of the speech, which contains good ideas, whether the author has discovered a cure for strikes or not.

RATING OF MINES.

The Bill introduced by Mr. PERCY WYNHAM on this subject was considered at an influential meeting of the Cornwall County Assessment Committee, held at the Royal Hotel, Truro, on Wednesday. The bill provides (1) that all mines shall be rated; (2) that where a mine is let to a tenant the royalty shall be considered the gross estimated value; (3) that allowance shall be made for the exhaustion of the corpus; (4) that occupiers may deduct one-half the rates from the dues under existing leases; and (5) that in Cornwall, Devon, and Derbyshire owners, instead of occupiers, shall be rated.

Mr. ROBERTS, M.P., remarked that the fifth clause would, probably, be erased by the House. He requested the opinion of the meeting on the second clause. As to the fourth clause, proposing that in the case of existing leases the occupiers of a mine should be allowed to deduct half the rates, he thought it was very fair. However, he had always believed the whole ought to be deducted, and he knew from what he had heard in different parts of the county that there would be no objection to the deduction of the half.—Mr. KENDALL, M.P., observed that if clause 5 were thrown out another point arose, whether it was possible so to modify clause 2 as to meet the difficulty.—Mr. ST. AUBYN, M.P., entirely agreed with what the previous speakers had said. The position was one of considerable difficulty, and ought to be well considered. The second reading would have to be decided upon before they knew the fate of the fifth clause; and, as they could not go back after that clause had been disposed of, it would be necessary for them to provide against the possible contingency before.

Mr. DEBBLE BOGER was not quite aware of the importance of the fifth clause, and thought it almost impossible to view the clause except in relation to each other. The principle of the Bill was the rating of royalties. This particular clause said that the owners should be rated, and not the occupiers. He did not see that it mattered much which.—Mr. P. P. SMITH said that in clause 2 it said "the royalty or rent reserved as payable to the owner shall, unless the contrary is shown, be deemed the gross estimated rental." Clause 5 contained no such words as "and the contrary be shown," but made the "rent, royalty, toll, or due" the basis of assessment without any qualification. With this exception, he did not see why if clause 5 were rejected clause 2 should not be allowed to stand.

Mr. CHILDS thought the county would be quite content to accept a Bill assessing the lord. In respect of their dues, but as this measure stood it was objectionable. He knew cases in which it would make mines pay the greater part of the rates of their parishes.—Mr. BOGER suggested the addition to the Bill of a proviso that for the payment of rates the ores and machinery of the mines should primarily be distrainable, and that then in default the owners should be liable. They were suffering from the miserable quibble which put mines in which dues were reserved in kind upon a different footing from those in which there was money payment.—Mr. TYACKER thought if the five words "until the contrary be shown" were struck out of clause 2, the Bill might pass without injury if clause 5 were expunged.

It was then resolved to request the county members to support the second reading of the Bill; and it was eventually decided, on the motion of Capt. TEAGUE and Mr. MORGAN, to adopt the proposition of the High Sheriff (Mr. T. S. BOLITHO), who, in conjunction with Mr. CORNISH, had drawn up a resolution to the effect that clause 2 should be altered to prevent the rating of anything beyond royalty, a proportionate equivalent being added to the sum virtually paid in respect of any bonus that might have been given at the granting of any lease.—On the motion of Lord BALMUTH, seconded by Mr. BASSETT, a committee, consisting of Messrs. T. S. BOLITHO, D. BOGER, P. P. SMITH, DINGLE, C. CHILDS, F. HILL, J. TAYLOR, T. CORNISH, G. CLYMA, WARRINGTON SMYTH, R. W. CHILDS, and Capt. TEAGUE, was appointed to consult with the county members from time to time when the Bill came before Parliament.

SCOTTISH AUSTRALIAN INVESTMENT COMPANY.

A general meeting of proprietors was held at the London Tavern, yesterday. Mr. CHARLES WHETHAM in the chair.

The notice convening the meeting having been read, the report of the directors (an abstract of which appeared in last week's Journal) was taken as read.

The CHAIRMAN, in moving its adoption, referred at some length to its salient points. He need hardly say that the half-year embraced in these accounts was always the most unproductive portion of the year in Australia, and the board generally kept a reserve from the other more profitable six months, with the view so far as possible of equalising dividends. The manager (Mr. Morehead) being present on a visit to England, he could not do better than ask him to give his opinion on the position and prospects of the company's pastoral property.—Mr. MOREHEAD read some notes, in which he stated his views, and expressed a favourable opinion as to the result to be derived from the important investment known as the Landsborough Runs, at Bowen Downs, and the Gulf of Carpentaria, in Queensland.—Mr. YOUNG seconded the motion for the adoption of the report and accounts.

Mr. MANSELL expressed his doubts as to the remunerative character of sheep farming; and, in support of his opinion, instanced the unsatisfactory results realised by two other Australian companies which had for many years devoted themselves to that pursuit.

Mr. YOUNG thought he knew the companies alluded to, and that they had lost their money by other operations than sheep farming, from which latter, indeed, all their profits had been derived.—A PROPRIETOR suggested that so soon as a good profit could be realised the sheep farming property, or portions of it, should be sold.—Mr. MOREHEAD quite admitted that sheep farming might not prove to be successful; but looking at the property the company possessed, he must say he regretted it in a much more favourable view. It did not seem to him any other than a fitting element, although, of course, he was subject to correction, for an investment company to hold a pastoral property. He thought that in a great many instances losses had been made for want of a good system of management. The plan he should think advisable to adopt was always to let the profits from the pastoral property accumulate to some extent before anything was divided. But, after all, one of the alternatives always had been that the property, or part of it, should be held only temporarily.

Mr. YOUNG said that he did not wish to undertake the office of prophet, but he thought, judging from his own experience in the investment of money in sheep farming in the colony, that a good result was likely to attend the company's operations at Landsborough Runs. Of course care and judgment must be exercised in these matters, and a great deal depended upon the character of the country, which in the case of their lands was all that could be desired.

After some further discussion, the report was received and adopted unanimously, and a dividend at the rate of 10 per cent. per annum (less income tax) was declared, payable on the 15th proximo.

Messrs. A. L. Elder and P. P. Ward were unanimously elected directors in the room of Mr. Kendall, resigned, and Mr. Dickson, deceased. Mr. W. B. C. well was re-appointed auditor.

A vote of thanks to the Chairman and directors was passed, which terminated the proceedings.

[For Meetings of other Companies see Supplement to this day's Journal.]

[ADVERTISEMENTS.]

From Mr. EDWARD COOKE.—The market has undergone little change during the past week, and prices are without much alteration. It is a good time to buy into several mines that hold out great prospects of success, and which are now selling at prices that can scarcely fail to give a large profit upon present outlay. I would name North Trekerby, West Drake Walls, New Wheel Lovell, West Caradon, East Trumpet Consols, Caldbeck Fells, West Killy, Frank Mills, Prosper United, West Great Work, and North Crofty among the non-dividend; and the following among the dividend mines:—Great Wheel Vor, East Lovell, Wheel Seton, Great Laxey, West Chilverton, Trumpet Consols, and Tincroft. All the above are eligible, either for speculation for a rise or investment, and the time has arrived when they may all be bought into with safety.

From Messrs. WARD and JACKMAN.—During the week there have many enquiries for shares, in both dividend and progressive mines, but in the latter description, owing to symptoms of improvement in prospects, sellers have not been so anxious to realise. We have endeavoured to show that though a degree of risk must, and always will, attach to mining, yet it is not that "leap in the dark" so often represented. Machinery has arrived at such perfection, and labour so economised, that it is as unlike what it was a few years ago as chalk and cheese; and even when heavy panics have occurred no property has stood the shock, or kept its value so steadily, as well-conducted mines. Under these impressions, we do not hesitate to recommend these securities, and in doing so we fearlessly state there is no industry which will afford more profitable results, if prosecuted with the necessary knowledge. We subjoin a few extracts from advices received this week from our correspondents:—The CLIFFORD AMALGAMATED MINES are looking better than when the last report was sent out, and an improved standard for tin and copper would soon place them in the Dividend List. When we consider that these mines are selling for less than 17,000l., when the machinery alone cannot be worth less than 30,000l., it appears preposterous. WEST FRANCES have risen to 40l., and considering the indications of further discoveries, are cheap. They have at present a splendid lode in the 85 fm. level, worth for tin over 90l. per fm. There are two levels in the 77 and 95, not so far in advance as the 85, but which will be so in about two months; and if these prove equally good the shares must go to 100l., if not higher. EAST BASSETT is selling for rather better than 8000l. No one will look at the shares now they

can be had so cheap. It was just the same with WEST FRANCES, a few months since, when selling at 9l.—now 40l. The tribute pitches at EAST BASSETT are looking better than for months past. The new shaft is sunk 5 fms. below the 130 fm. level, and the lode is a kindly one, producing occasional stones of pure copper ore; and from present appearances a productive lode is soon expected to rise in the back of the 130 west. North Trekerby, North Crofty, East Caradon, East Carn Brea, Great Bataclack, Grenville, South Grenville, South Crofty, West Drake Walls, West Prince of Wales, and Buller are "still" low-priced shares, and should not be neglected because they are so. We refer to one advertisement on the front page, where the latest closing prices (Friday evening) of all the above-mentioned mines will be found.

From Mr. EDWARD BREWIS.—The mining share department this week has exhibited increased firmness. North Wheel Crofty, Summer Hill, West Chilverton, Great Laxey, Chontales, Don Pedro, and Prince of Wales being the principal shares dealt in. On Monday North Crofty shares were steady at 2½ to 2¾, but just after hours an increased demand sprung up, and shares rose to 2¾, 3. On Tuesday last they again advanced to 3½, 3¾. The 180 east has improved to 90l. per fathom. Frontino and Bolivia are again firmer, the entire cost of the Bolivia Mines for the month ending Nov. 20 is 631l. 15s. 2d., and the produce 287½ ozs. of gold dust, of the estimated value of 631l. Altogether this must be considered very satisfactory, as the La Salada Mine of the group will, it is anticipated, give results shortly which may probably send the shares to 35s. each, the present price, ¼ to 1, affords certainly a large scope for profit. Summer Hill "lead," from the dividends paid, is actually paying the purchase 35 to 40 per cent. on his investment. I am informed by the Chairman that increased dividends will shortly be paid, and the agent at the mine says there is great scope for improvement and fresh discoveries. I should not be surprised on these terms to see shares double in price, irrespective of paying "largely" per centum on the purchase.

THE PROGRESS OF MINING—AS A SCIENCE, AND SOURCE OF COMMERCIAL WEALTH.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—There has just issued from the press a pleasantly-written little book, "The Mining Fields of the West," which, to some extent, marks the interest taken in mining matters in quarters beyond the localities in which such brochures would command immediate attention. I mean the sites to which the descriptions themselves apply. "The Mining Fields of the West," as the name implies, is a description of the different mining districts of Cornwall and Devon, classified in convenient divisions for reference, and furnished with the author's reasoning and opinions upon the different mines and localities. Many of these opinions it is impossible to controvert, and they are all given with clearness and temperance of statement, showing that the author, Mr. Charles Thomas, had well considered the different subjects under discussion. For example, in the chapter devoted to the old and new ground, about the Godolphin hills, the western slopes of these mountains are dwelt upon as situations particularly adapted for mining trials, inasmuch as they can be unwatered by adits to the depth of 60 fms., and that the lodes of tin are exceedingly rich; and it must be allowed that such sites offer unusually favourable opportunities for investment. It is not, however, so clear to my mind that people ought to be censured for persevering in opening old mines. Mr. Thomas says, in page 8—"It is only in this way that we can account for the dogged perseverance with which many companies persist in working old, deep, and ruinously expensive mines, whilst there is an abundance of mining ground on every side of them, possessing features similar in almost every particular to those which accompanied the great bodies in the old mines, which have at length become exhausted." Now, I am rather of opinion that it is owing in many instances to the companies not persevering far enough that leads to the disastrous results and the loss, and I shall fortify my reasoning from quotations from the author's ownable work, pages 10 and 11. Speaking of Dolcoath, the very deepest of our mines, he says—"But at length, after a long period of prosperity in the copper mines, a depth was reached in a large portion of them at which the lodes ceased to produce copper, and were again found to yield tin. When this change was at first met with it was looked upon as a great misfortune, it being regarded as the end of one source of wealth, and not as the commencement of another. The further prosecution of the mine in depth was, therefore, abandoned. This was the case in Dolcoath, where the bottom workings were filled with water for many years, and on being again drained were found to be rich in tin, from which profits have since been realised to the extent of about 170,000l."

I believe that in nine cases out of ten, where deep mines are abandoned from poverty, if the levels were extended upon these valuable lodes, and the shafts sunk, mining prosperity would be rendered much more permanent and certain. It is the dividing profits too early and too rapidly, and not developing the whole length of the lodes in the grants, that most frequently tend to partial exhaustion of ore ground, and destruction of the success of companies. Another instance, in an ably but, as I think, far too censoriously written article on "Great Wheal Vor and its Management." He says, "These persons were completely unacquainted with practical mining, and in every instance where mines are so managed the same results have followed. At last the company were driven by sheer necessity to give up the old mines, their capital having been all exhausted; and, making a final effort to regain something from the wreck, they succeeded in forming a new company out of the debris of the first one, and raising a capital to work the south part of their ground, called Wheal Metal, which had already yielded to them considerable profit. In this undertaking, after varying fortunes, they have been able to achieve a great success, and have now, probably, the best tin mine in Cornwall. Their returns are now from 70 to 80 tons of tin ore per month, the money value of which is about 4000l." It is easy to censure the unsuccessful, but I think the author goes too far when he says the old company knew nothing of mining. It was they who, with the skilful guidance of Hocking and Loam, erected the 100-in. cylinder engine, and accomplished the unwatering of the greatest and one of the best mines that was ever worked in Cornwall, an achievement requiring no common ability or perseverance; and if they had not money to drive under Wheal Metal and other portions of their rich lodes, I think it detracts but little from their judgment in mining matters, since almost the same agency have maintained their claim to our respectful consideration by their successfully opening up the Great Wheal Metal, not an insignificant fact when judged by the great mining records in the county. But in general the book is ably and impartially written, and most of the descriptive matter is well given and very interesting; for instance, the comparative merits of lodes and the value of their ore ground deserves notice. In page 24, speaking of Great Wheal Vor, he says, "In many places an area of the lode 6 feet square was worth 1000l.—i.e. the cubic fathom. The returns of this mine amounted for some time to 200 tons of black tin per month, which would yield 150 tons of fine metal, the value of which would be at the present price from 11,000l. to 12,000l."

I draw attention to the immense amount of riches enclosed in a cubic fathom of this lode. Supposing the stoping cost even 10l. a fathom, that would leave fully a thousand pounds margin for profit. This shows what mining is capable of, when the fortunate miner hits upon a rich body of ore. Well may we say that it is only the stroke of the pick that keeps the miner from his fortune. Another scenic description shows the author's ability in dealing with mining scenery. "At the east foot of the Godolphin Hill there is a dreary looking valley, filled with mounds of broken rock and crumbling ruins, marking the site of the old Godolphin Mine, which was formerly so rich. Here also is situated in close proximity to the remains of the old mine the mansion of the now extinct family of the Godolphins. Although gone very much into decay, and altered to adapt it to the requirements of a modern farm-house, sufficient of this fine old building remains to attest its former grandeur, and to show that it was once the residence of a great family. It is still surrounded by trees, the remains of the woods which, without doubt, at one time occupied a much larger area, clothing the neighbouring valley, and extending up the hill. The valley, which now looks so desolate, must have presented at one time a very different appearance—filled with foliage, affording cover for game, and watered by pleasant streams, in which fish abounded. This place was the seat of Earl Godolphin." M. F.

HOLLOWAY'S OINTMENT AND PILLS—BILIOUSNESS AND DYSPEPSIA.—There is no organ in the human body so liable to derangement as the liver. Food, fatigue, climate, and anxiety all disorder the action, and render its secretion (the bile) more or less depraved, superabundant, or scanty. The first symptoms should receive attention. A pain in the side or top of the shoulder, and a harsh cough and difficulty of breathing are signs of liver disease, which are removed without delay by friction with Holloway's Intestine Ointment. The Pills should also be taken early. For all diseases of this vital organ the action of these conjoined remedies is a specific, by checking the over supply of bile, regulating its secretion, and giving nervous tone.

Contract for Coals for Haulbowline.

CONTRACT DEPARTMENT, ADMIRALTY, SOMERSET HOUSE.

THE COMMISSIONERS for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that on **TUESDAY**, the 11th February next, at Two o'clock, they will be **READY TO TREAT** with such persons as may be willing to **CONTRACT FOR SUPPLYING AND DELIVERING** into Store at Her Majesty's Naval Yard at Haulbowline,

SEVEN HUNDRED TONS OF SMOKELESS SOUTH WALES COALS, fit for the service of Her Majesty's steamships and vessels. The coals to be delivered by the 11th March next.

A form of the tender and conditions of contract may be seen in the lobby of the Storekeeper-General's Department, Admiralty, Somerset House. Notender will be received after Two o'clock on the day of treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing.

The tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Coals for Haulbowline," and must be delivered at the Department of the Storekeeper-General, Admiralty, Somerset House, accompanied by a letter signed by a responsible person, engaging to become bound with the person tendering in the sum of £25 per cent. on the value for the due performance of the contract.

By order, **ANTONIO BRADY**, Registrar of Contracts and Public Securities, Contract Department, Admiralty, Somerset House, Jan. 24, 1868.

Contracts for Military Purveyor's Stores.

NOTICE IS HEREBY GIVEN, to all PARTIES DESIROUS OF TENDERING for the SUPPLY of such QUANTITIES of the UNDERMENTIONED ARTICLES, namely:—

- 1.—MUSTARD, PEPPER, SALT, &c.
- 2.—BLACKING, and other cleaning articles.
- 3.—BOTTLED ALE and PORTER, SHERRY and BRANDY.
- 4.—MILK, POWERS, EGGS, and FISH.
- 5.—POIAGES, VEGETABLES, LEMONS, ORANGES, &c.

as may be required during a period of twelve months from 1st of March, 1868, for the service of the Military Hospitals at Aldershot Camp.

Particulars and forms of tender may be obtained by application to the Principal Purveyor to the Forces, at his office, New Hospital, South Camp, Aldershot.

Sealed tenders must be delivered at the said office of the Principal Purveyor, properly filled up and signed (in triplicate), one or before the 8th February, 1868, accompanied by samples.

W. J. A. TUCKER, Principal Purveyor to the Forces.

ELFORD, WILLIAMS, AND CO., COPPER ORE WHARFINGERS, SHIP BROKERS AND COAL EXPORTERS, METAL AND GENERAL COMMISSION AGENTS, SWANSEA.

ELFORD, WILLIAMS, AND CO., having erected an assay office, and engaged the services of a practical assayer, who will devote his whole time to this branch of their business, they are now in a position to make correct assays of silver, copper, and other mineral ores, on the most moderate terms.

SILVER ORES.

COLONEL DAVID E. BUEL, late Commissioner from Nevada (U.S.) to the Paris Exposition, has on EXHIBIT the LARGE COLLECTION of SILVER ORES from that STATE at Room 108, Palmerston-buildings, 34, Old Broad-street, E.C.

The Colonel most cordially invites the public to call and examine the collection, where he will be pleased to impart all information in his power in regard to the mining development of the Western Coast of America.

In the Press, and will be published early in February, to be continued quarterly, in small 4to, bound in cloth, price Five Shillings.

INDEX TO THE TIMES NEWSPAPER FOR 1867.

AUTUMNAL QUARTER—Oct. 1 to Dec. 31.

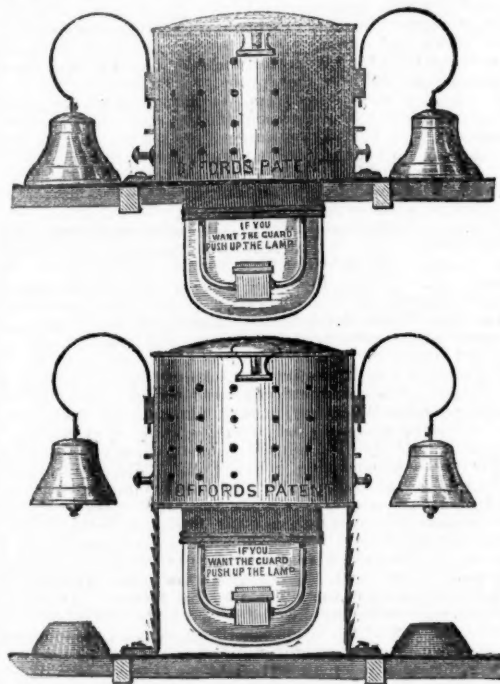
This index is in *extenso*; the births, deaths, marriages, bankruptcies, wills, civil and criminal cases, parliamentary proceedings, speeches, local, scientific, mining, and foreign news, naval and military intelligence, are all classified in full, and the index so arranged as to do for any file without paging or marking.

London: SAMUEL PALMER, 20, Catherine-street, Strand.

The editor respectfully solicits subscribers to his Index. Without it the Times, though the most gigantic engines of the press, dies daily; but with it it becomes the never-fading memorial of the world's history, the unfailing reference-book for all classes and societies.

INTERCOMMUNICATION BETWEEN PASSENGERS AND GUARD.

Although the number of suggestions for effecting a communication between passengers and guard has been very great, not one has been considered worthy of general adoption, the opinion of most persons practically connected with railway affairs being that, judging from experience, the English are too fond of mischief to be trusted with such a powerful instrument of danger as the means of stopping a train; and that, even assuming a means of communication were desirable, there is no contrivance equal in simplicity or efficiency to the American system of a cord and bell. Adopting similar views, Mr. J. OFFORD, W.C., of Wells-street, has devised an arrangement in which even the use of the cord is dispensed with. The arrangement will be at once understood by reference to the subjoined diagrams, the first of which shows the apparatus in ordinary travelling trim, and the second its appearance when the signal is being given:—



It is claimed that the expense of the arrangement will be but trifling, as the ordinary lamp, which already exists in each compartment, is made available with the addition of one or more bells, attached by springs to the protector, as now used with every lamp. By means of two springs and ratchets, as shown in the drawing, the lamp rises by anyone gently pushing at the bottom of the glass, and the bells leave the small blocks on which they rest, and ring rapidly until the train is stopped, or the lamp lowered, which can only be done from the roof. The signal needs no attention, and is always ready for action, and it cannot be tampered with without its being discovered who has done so. It is believed that, from the fact of there being a signal, all attempts at robbery or violence will cease, which, combined with the check upon accidents, will cause many more persons to travel, and thus increase the revenue of the railways much more than the cost. The spot where attention is required is at once seen, either day or night, without additional lights, and unimpeded by curves or lights from the windows. Among other advantages, this signal would be plainly seen at all the stations, and it cannot be prevented from acting.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending January 26 amounted to 96907. 10s. 3d.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862, and of the EAST BASSET AND GRYLLS MINING COMPANY.—ALL CREDITORS or CLAIMANTS of the above-named company who have not received notice from the Registrar of the said Court that their claims have been already admitted are hereby required to COME IN AND PROVE THEIR SEVERAL DEBTS OR CLAIMS at the Registrar's Office, Truro, on Tuesday, the 11th day of February next, at Eleven o'clock in the forenoon, or in default thereof they will be EXCLUDED from the BENEFIT OF ANY DISTRIBUTION made before such proof. And for the purpose of such proof they are to attend in person or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court at Truro, such affidavits being sworn either before some Commissioner of the said Court or before any Court Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

WM. MICHELL, Registrar of the above-named Court, Truro, Cornwall.
Dated Registrar's Office, Truro, January 29th, 1868.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the GOONINIS MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 20th day of January instant, presented to the Vice-Warden of the Stannaries by James Saunders the Elder, a contributory and also a creditor of the said company, and that the said petition is directed to be heard before the Vice-Warden at the Prince's Hall, Truro, in the county of Cornwall, on Thursday, the 20th day of February next, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioner, his solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 17th day of February next, and notice thereof must at the same time be given to the petitioner, his solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall (Solicitors for the Petitioner);
GREGORY, ROWCLIFFE, AND RAWLE, of No. 1, Bedford-row, London, Agents of the said Solicitors.

Dated Truro, the 28th day of January, 1868.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the PENHALE MOOR MINING COMPANY.—By direction of His Honour the Vice-Warden, notice is hereby given that, on the 10th day of February next, at Eleven o'clock in the forenoon, at the Registrar's Office, at Truro, in the county of Cornwall, this Court will PROCEED to MAKE a CALL of FIFTEEN SHILLINGS PER SHARE on all the contributories of the above-named company, under Class A.

All persons interested therein are entitled to attend at the time and place aforesaid to offer objections to such call.

Dated Truro, January 27th, 1868. WM. MICHELL, Registrar.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL LOVELL MINING COMPANY.—TO BE SOLD, BY PUBLIC AUCTION, at and upon the WHEAL LOVELL MINE, situate in the parish of Wendron, in the county of Cornwall, under the direction of the Registrar of the said Court, on Tuesday, the 11th day of February next, at Twelve o'clock at noon, subject to such conditions as shall be then and there produced, together or in lots, all the INTEREST of the SAID COMPANY of and in the SETT or GRANT by virtue of which the mining operations of the said company have been carried on, and the undermentioned

MINING MACHINERY, MATERIALS, and EFFECTS,

Now at the said MINE, viz.:—
STEAM ENGINE, 50 in., 9 ft. stroke in cylinder, with first piece of rod, with woodwork of engine-house.

TWO BOILERS, 19 tons, with fittings.

Steam WINDING ENGINE, 16 in., 4 ft. stroke, with fly wheel and whelm cage.

Steam STAMPS ENGINE, 24 in., 8 ft. stroke, with two fly wheels and cranks attached.

ONE BOILER, 10 tons, with fittings; 2 stamps axles, with cranks, blocks, and brasses, 24 heads; wood frames, with bolts in the same, and a variety of other effects.

To view, apply to Mr. JAMES JAMES, at the mine.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall (Solicitors for the Vendor);
Dated Registrar's Office, Truro, 29th January, 1868.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL UNITY CONSOLS MINING COMPANY.—TENDERS will be RECEIVED at the Registrar's Office, Truro, until FRIDAY, the 14th day of February next, stating the highest price which will be given for the whole or any part of the

MINING MACHINERY and MATERIALS,

AT WHEAL UNITY CONSOLS MINE, in the parish of Gwinear, within the said Stannaries.

40 in. cylinder PUMPING ENGINE, with 2 10-ton BOILERS, complete; steam WHIM ENGINE, 26 in. cylinder, with a 6-ton BOILER; capstan, vice, and a variety of other articles and effects in general use in mines.

For leave to inspect the same, apply to Mr. THOMAS BASSETT in charge thereof.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall (Agents for S. T. G. Downing, Solicitor, Registrar);
Dated Registrar's Office, Truro, January 29, 1868.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the CARNORTH MINING COMPANY.—The Registrar of this Court has appointed FRIDAY, the 14th day of February next, at the Registrar's Office, at Truro, to SETTLE the LIST of CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.

WM. MICHELL, Registrar of the said Court.
Dated this 30th day of January, 1868.

THE NEW HOUSE COLLIERY, IPSTONES.

near CHEADLE, about one mile from FROGHALL STATION, on the Churnet Valley Branch of the North Staffordshire Railway Company.

HIGHLY IMPORTANT TO COLLIERY PROPRIETORS, BUILDERS, ENGINEERS, AND OTHERS.

MESSRS. FERGUSON AND SON are instructed to SELL, BY AUCTION, upon the aforesaid premises, on Thursday, the 6th day of February, 1868, the WHOLE of the COSTLY and MODERN WORKING PLANT, including valuable high-pressure horizontal ENGINE, 45 horse; ditto, 12-horse; condensing PUMPING ENGINE, upwards of 250 horse, cylinder 76½ in. diameter, engine beam about 18 tons; excellent new Cornish and egg-ended BOILERS, complete; treble purchase capstan, to lift 15 tons; tee box, 6 tons 10 cwt.; ditto, 7 tons 5 cwt., with wrought-iron fittings, &c., complete; large connecting rods; double throw crank; force pump, with brass valves, &c., complete; pit head gear; cast iron cistern; 60 yards of 13 in. pump trees; upwards of 100 yards of pitch pine pump rods, with straps; new 14 in. ram, 12 ft. long; 1 1/2 in. ditto, 5 ft. stroke; clock pieces, &c.; quantity of 8 in. pitch pine rods and straps for ram; weighing machines; pit wagon; buckets; bridge rails; wire and hemp ropes; an immense quantity of engineers', blacksmiths', carpenters' and other tools; screw keys; bolts; bridges; tashing and drag chains; timber; and a multiplicity of other truly valuable plant too numerous to particularise.

Sale at Twelve o'clock to the minute.

Descriptions will be ready eight days previous to sale, and can be had on application to the auctioneers, Market-place, Leek.

PRELIMINARY ANNOUNCEMENT.

LANCASHIRE STEEL COMPANY (LIMITED).

MR. WHEATLEY KIRK is honoured with instructions from the Official Liquidators of the Lancashire Steel Company (Limited) to SELL, BY AUCTION, shortly, at the Clarence Hotel, in Manchester, the EX-CELENT VALUABLE PROPERTY, constituting their PATENT FILE WORKS AT MANCHESTER, viz.:—Land, buildings, steam-engines, boilers, shafting and mill-gearing, steam, water, and gas pipes, plant, machinery, utensils, &c.

Full particulars in future papers, or, in the interim, of Messrs. SLATER and BARLING, solicitors, 4, Norfolk-street; or of F. H. JEWELL, Esq., and THOS. BROWNING, Esq., official liquidators, 108, King-street; or the auctioneers, 1, Essex-street, King-street, Manchester.

NEW PLANING MACHINES, WARRANTED, will plane 6 ft. 6 in., by 2 ft. 10 in., by 2 ft. 11 in., 2 ft. 12 in., 2 ft. 13 in., 2 ft. 14 in., 2 ft. 15 in., 2 ft. 16 in., 2 ft. 17 in., 2 ft. 18 in., 2 ft. 19 in., 2 ft. 20 in., 2 ft. 21 in., 2 ft. 22 in., 2 ft. 23 in., 2 ft. 24 in., 2 ft. 25 in., 2 ft. 26 in., 2 ft. 27 in., 2 ft. 28 in., 2 ft. 29 in., 2 ft. 30 in., 2 ft. 31 in., 2 ft. 32 in., 2 ft. 33 in., 2 ft. 34 in., 2 ft. 35 in., 2 ft. 36 in., 2 ft. 37 in., 2 ft. 38 in., 2 ft. 39 in., 2 ft. 40 in., 2 ft. 41 in., 2 ft. 42 in., 2 ft. 43 in., 2 ft. 44 in., 2 ft. 45 in., 2 ft. 46 in., 2 ft. 47 in., 2 ft. 48 in., 2 ft. 49 in., 2 ft. 50 in., 2 ft. 51 in., 2 ft. 52 in., 2 ft. 53 in., 2 ft. 54 in., 2 ft. 55 in., 2 ft. 56 in., 2 ft. 57 in., 2 ft. 58 in., 2 ft. 59 in., 2 ft. 60 in., 2 ft. 61 in., 2 ft. 62 in., 2 ft. 63 in., 2 ft. 64 in., 2 ft. 65 in., 2 ft. 66 in., 2 ft. 67 in., 2 ft. 68 in., 2 ft. 69 in., 2 ft. 70 in., 2 ft. 71 in., 2 ft. 72 in., 2 ft. 73 in., 2 ft. 74 in., 2 ft. 75 in., 2 ft. 76 in., 2 ft. 77 in., 2 ft. 78 in., 2 ft. 79 in., 2 ft. 80 in., 2 ft. 81 in., 2 ft. 82 in., 2 ft. 83 in., 2 ft. 84 in., 2 ft. 85 in., 2 ft. 86 in., 2 ft. 87 in., 2 ft. 88 in., 2 ft. 89 in., 2 ft. 90 in., 2 ft. 91 in., 2 ft. 92 in., 2 ft. 93 in., 2 ft. 94 in., 2 ft. 95 in., 2 ft. 96 in., 2 ft. 97 in., 2 ft. 98 in., 2 ft. 99 in., 2 ft. 100 in., 2 ft. 101 in., 2 ft. 102 in., 2 ft. 103 in., 2 ft. 104 in., 2 ft. 105 in., 2 ft. 106 in., 2 ft. 107 in., 2 ft. 108 in., 2 ft. 109 in., 2 ft. 110 in., 2 ft. 111 in., 2 ft. 112 in., 2 ft. 113 in., 2 ft. 114 in., 2 ft. 115 in., 2 ft. 116 in., 2 ft. 117 in., 2 ft. 118 in., 2 ft. 119 in., 2 ft. 120 in., 2 ft. 121 in., 2 ft. 122 in., 2 ft. 123 in., 2 ft. 124 in., 2 ft. 125 in., 2 ft. 126 in., 2 ft. 127 in., 2 ft. 128 in., 2 ft. 129 in., 2 ft. 130 in., 2 ft. 131 in., 2 ft. 132 in., 2 ft. 133 in., 2 ft. 134 in., 2 ft. 135 in., 2 ft. 136 in., 2 ft. 137 in., 2 ft. 138 in., 2 ft. 139 in., 2 ft. 140 in., 2 ft. 141 in., 2 ft. 142 in., 2 ft. 143 in., 2 ft. 144 in., 2 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NICHOLLS, MATHEWS, AND CO., ENGINEERS,
BEDFORD IRONWORKS, TAVISTOCK.
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The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.
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THE TURBINE.

MAC ADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, after twenty years of experience, have brought their IMPROVED TURBINE to great perfection.
It is applicable to all practicable heights of fall, giving much greater power from the water than any other kind of water-wheel.
On low falls it has the great advantage of not being impeded by floods or backwater.
It is particularly well adapted for situations where the quantity of water is variable, and where all other wheels fail.
Its motion is extremely regular, and, when desired, a governor can be applied effectively.
This wheel is at work in a great many places, to which reference will be given.

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It is ground in oil by steam-power, and packed in ironbound casks from 1 to 3 cwt. each. Price, delivered at Southampton, 32s. 6d. per cwt., packages included. Apply, in London, to W. J. MOYSEY, 39, Upper East Smithfield; and, in Southampton, to Messrs. PEACOCK and BUCHAN, or their accredited agents in all the principal cities and seaports of the kingdom.

SIX POUNDS PER WEEK
While laid up by injury, and
ONE THOUSAND POUNDS IN CASE OF DEATH CAUSED BY ACCIDENT OF ANY KIND,

May be secured by an annual payment of from £3 to £6 5s.
TO THE
RAILWAY PASSENGERS' ASSURANCE COMPANY.
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May also be provided against by Insurance tickets for single or double journeys.
For particulars apply to the Clerks at the Railway Stations, to the Local Agents, or at the
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N.B.—Cases of recent infection cured in two days.

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CURE YOURSELF BY THE PATENT SELF-ADJUSTING CURATIVE AND ELECTRIC BELT.—Sufferers from nervous debility, painful dreams, &c., can now cure themselves by the only guaranteed remedy in Europe, protected by Her Majesty's great seal. Free for one stamp by H. JAMES, Esq., Percy House, Bedford-square, London.
N.B.—Medicines and fees superseded.
Reference to the leading Physicians of the day.

HEATON'S PATENT STEEL.

THE LANGLEY MILL STEEL & IRONWORKS COMPANY

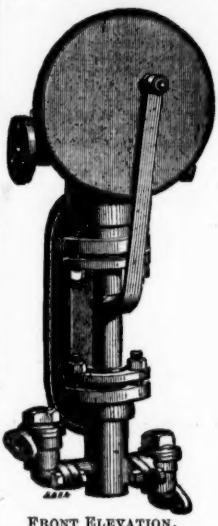
(LIMITED),

LANGLEY MILL, NEAR NOTTINGHAM,

Are now making this Steel according to Mr. HEATON'S PATENTS, dated 17th March, 1866, and 3d May, 1867, under the direct superintendence of the Patentee.

It has been tested in a great variety of ways, and is found to be at least equal to any that can be met with. It is uniform in quality, and is suitable for any purpose to which high-class steel can be applied.

Samples and prices can be obtained on application to the company; or to any of their recognised agents.



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THE NEW PATENT INJECTOR,

FOR FEEDING BOILERS AND RAISING WATER FOR OTHER PURPOSES.

PRICES, DELIVERED IN LONDON.									
Size.	Ram.	Stroke.	Approx. horse-power	Approximate gallons thrown per hour.	150 rev.	200 rev. p. min.	Price.		
No. 4	in.	in.	boiler supplied. At 100 rev.						
5	1 1/2	3	15	115	172	230	£10 10		
6	1 3/4	3	22	180	270	360	12 12		
7	2	4	30	240	360	480	14 14		
8	2 1/4	4	40	345	517	690	17 0		
9	2 1/2	5 1/2	55	475	712	950	19 10		
10	2 3/4	6 1/2	75	585	877	1170	22 10		
11	3	7 1/2	90	720	1080	1440	25 10		
12	3 1/4	8	110	870	1305	1740	28 10		
13	3 1/2	9	120	1080	1645	2060	31 10		
14	3 3/4	10	230	2450	3675	—	40 0		
16	4 1/4	8	460	4900	7350	—	55 0		

* The two last are double-acting.

Steam Regulator Valves, and also Check Valves, specially made to suit these Engines, can be supplied.

Terms: Nett Cash on Delivery.

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STILLS, PANS, AND GENERAL COPPER WORK,

IMPROVED WATER GAUGES, BLOW-OFF COCKS, SAFETY VALVES, FUSIBLE PLUGS, &c.,

As recommended by the Steam-Boiler Associations.

GENERAL STEAM WORK, WHEEL VALVES, SLUICE VALVES, COCKS, &c.

IMPROVED GAS VALVES.

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STEAM ENGINE INDICATORS.

Wrought Iron Tubes and Fittings for Steam and Gas Work.

KNOTT MILL BRASS AND COPPER WORKS,

AND AT
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NEAR THE EXCHANGE.

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Illustrated Lists on Application.



PATENT FLEXIBLE TUBING,

AND BRATTICE CLOTH FOR MINES

MANUFACTURED BY

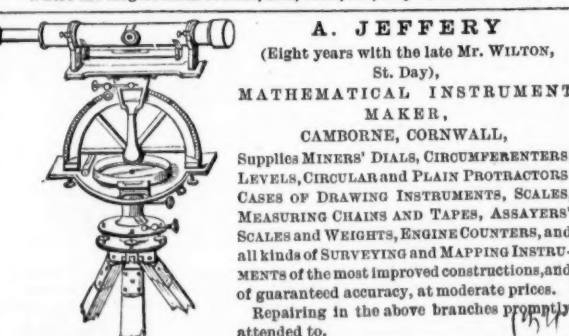
ELLIS LEVER,

WEST GORTON WORKS, MANCHESTER.

THOMAS TURTON AND SONS,

MANUFACTURERS OF
CAST STEEL for PUNCHES, TAPS, and DIES,
TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.
DOUBLE SHEAR STEEL, FILES MARKED T. TURTON.
BLISTER STEEL, EDGE TOOLS MARKED WM. GREAVES & SON.
SPRING STEEL, GERMANY STEEL,
Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.
LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.
Where the largest stock of steel, files, tools, &c., may be selected from.



A. JEFFERY

(Eight years with the late Mr. WILTON, St. Day),

MATHEMATICAL INSTRUMENT

MAKER,

CAMBORNE, CORNWALL,

Supplies MINERS' DIALS, CIRCUMFERENTERS, LEVELS, CIRCULAR and PLAIN PROTRACTORS, CASES OF DRAWING INSTRUMENTS, SCALES, MEASURING CHAINS and TAPES, ASSAYERS' SCALES and WEIGHTS, ENGINE COUNTERS, and all kinds of SURVEYING and MAPPING INSTRUMENTS of the most improved construction, and of guaranteed accuracy, at moderate prices.

Repairing in the above branches promptly attended to.

CREASE'S NEW AND IMPROVED PNEUMATIC TUNNELLING ENGINE.

THE PROPRIETORS of this INVENTION, in order to bring its CAPABILITIES more prominently before the PUBLIC, are OPEN to TAKE CONTRACTS for DRIVING LEVELS. Preference will be given to ADIT LEVELS and those places where ROTATORY MACHINERY is in use, and can be applied to driving the AIR COMPRESSOR.
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GREEN SLATES OF ANY SIZE, and of the CHOICEST COLOUR and QUALITY, can now be OBTAINED from the DOROTHEA WEST SLATE COMPANY (LIMITED), CARNARVON.
The "CHARING CROSS HOTEL," "STAR and GARTER HOTEL" (Richmond), "LONDON-BRIDGE HOTEL," and many other public buildings, are covered with these elegant slates.
Orders will be executed in regular succession.
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W. AND J. GALLOWAY AND SONS, ENGINEERS, MANCHESTER.

GALLOWAY BOILER TUBES

ARE ESPECIALLY ADAPTED FOR INTRODUCTION into EXISTING BOILERS. Upwards of 40,000 of these TUBES are now working. Full particulars of names of firms who have them at work may be had from the Patentees—
W. AND J. GALLOWAY AND SONS, ENGINEERS, MANCHESTER.

JOHN AND EDWIN WRIGHT, PATENTERS.

(ESTABLISHED 1770.)

MANUFACTURERS OF EVERY DESCRIPTION OF

PATENT FLAT AND ROUND WIRE ROPES,

From the very best quality of charcoal iron and steel wire.

PATENT FLAT AND ROUND HEMP ROPES.

SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TABPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.

UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.
UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM
CITY OFFICE NO. 5, LEADENHALL STREET, LONDON, E.C.

Swan Rope Works.

GARNOCK BIBBY, AND CO.,
CHAPEL STREET, LIVERPOOL.
MANUFACTURERS OF FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.
MANILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope.
WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

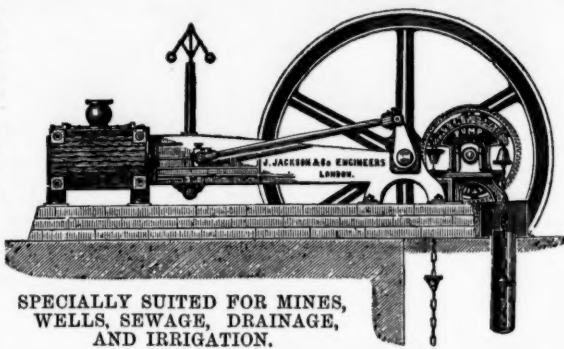
J. JACKSON AND CO., ENGINEERS, LONDON, E.C.

BASTIER'S PATENT CHAIN PUMP.

This is the most efficient pump ever introduced to public notice for deep vertical lifts. It is cheap in its first cost, requires no cleaning and little attention, and the cost of maintaining it with duplicate working parts is very small.

The water is lifted through vertical tubes. At every interval of yards a contracted part, or working barrel, is inserted, smaller in diameter than the main pipe, one of which is always placed at the lower end. An endless chain passes over the driving wheel at the top, going down free, and coming up through the tube, into which it enters by a bell-shaped mouth-piece. On this chain are fixed india-rubber discs, smaller in diameter than the main pipe, but fitting tight in the working barrels, so that all the water that enters is forced and carried through the main pipe. The discs being free all round from the pipe for nine-tenths of the whole distance, reduces friction to a minimum.

Eighty-seven per cent. of the whole area of the tube is lifted in water. A 3½ in. pump has lifted 120 gallons per minute, from a depth of 270 ft., with 10.75 indicated horse power; other sizes in proportion. These pumps are now at work throughout England, sizes varying from 2½ to 15 in. diameter, and up to 300 ft. deep.



SPECIALLY SUITED FOR MINES, WELLS, SEWAGE, DRAINAGE, AND IRRIGATION.

PUMPS WITH STEAM ENGINES, AND CATTLE, WIND, OR HAND-POWER GEAR,
Manufactured by the proprietors of the patent,

J. JACKSON AND CO.,

17, GRACECHURCH STREET, LONDON, E.C.

PRICE LISTS ON APPLICATION.

FOR THE COUNTIES OF NORTHUMBERLAND, DURHAM, YORK, DERBY, AND NORTH STAFFORD, APPLY TO

MR. THOMAS GREENER,

MINING OFFICE, NORTHGATE, DARLINGTON:

AGENTS FOR SCOTLAND.

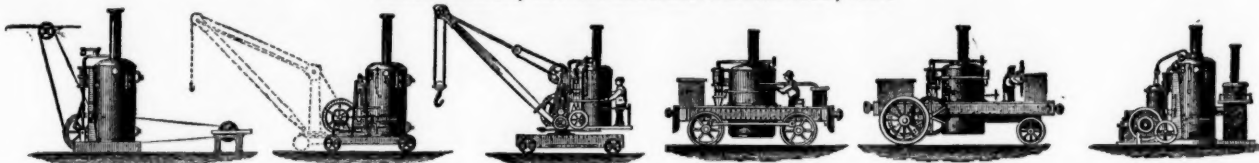
MESSRS. P. AND W. MACLELLAN,

127 and 129, TROGATE, GLASGOW.

A SMALL PUMP MAY BE SEEN AT WORK ON APPLICATION TO MESSRS. J. H. GREENER AND CO., 5, JOHN STREET, ADELPHI, W.C., WHO WILL ALSO SUPPLY ANY INFORMATION REQUIRED.

CHAPLIN'S PATENT PORTABLE STEAM ENGINES AND BOILERS.

PRIZE MEDAL, INTERNATIONAL EXHIBITION, 1862.



STATIONARY ENGINE,
From 1 to 30-horse power.
No building required.

PORTABLE HOIST,
1 to 30-horse power.
With or without jib.

STEAM CRANE,
30 cwt. to 20 tons.
For wharf or rail.

CONTRACTORS' LOCOMOTIVE,
6 to 27-horse power.
For steep inclines and quick curves.

TRACTION ENGINES,
6 to 27-horse power.
Light and heavy.

SHIP'S ENGINE,
Winding, Cooking, and Distilling.
Passed by Government for half water.

* These engines were selected by H.M. Commissioners to receive and send away the heavy machinery in the International Exhibition.

From the STRENGTH, SIMPLICITY, and COMPACTNESS of these ENGINES they are extensively USED for GENERAL PURPOSES, and also in situations where STEAM-ENGINES OF THE ORDINARY CONSTRUCTION CANNOT BE APPLIED.

ALEXANDER CHAPLIN AND CO., PATENTEES AND SOLE MANUFACTURERS,

CRANSTONHILL ENGINE WORKS, GLASGOW.

ENGINES OF EACH CLASS KEPT IN STOCK for SALE or HIRE, and ALL OUR MANUFACTURES GUARANTEED as to EFFICIENCY, MATERIAL, and WORKMANSHIP.

Parties are cautioned against using or purchasing imitations or infringements of these patent manufactures.

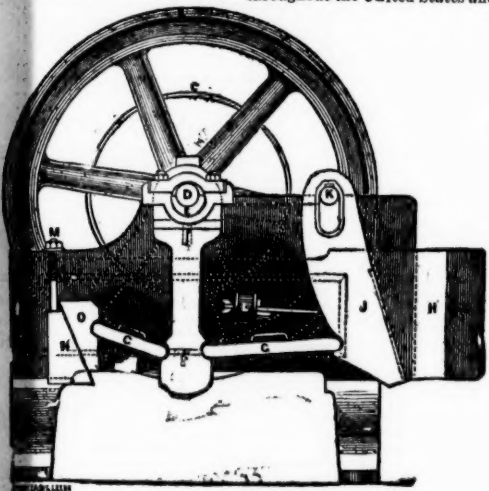
IMMENSE SAVING OF LABOUR.
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MCADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,

OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.

For the Parys Mining Company, JAMES WILLIAMS.

H. R. Marsden, Esq.

Eaton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.

H. R. Marsden, Esq.

THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent.

WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz.

WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust.

Messrs. ORD and MADDISON,

Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.

JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.

WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered third machine for this estate.

SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,

MEADOW LANE, LEEDS,

ONLY MAKER IN THE UNITED KINGDOM.

CAUTION!

BLAKE'S PATENT STONE BREAKER,

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

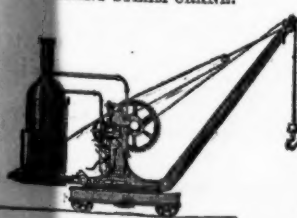
His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

SOLE MAKER IN ENGLAND,

H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.

PATENT STEAM CRANE.



TO LIFT, RADIATE, AND TRAVEL BY STEAM.

PARIS EXHIBITION, } Silver Medal for STEAM CRANES.
1867—AWARDS, } Bronze Medal for DONKEY FEED PUMPS.

APPLEBY BROTHERS,

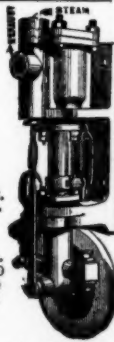
EMERSON STREET, SOUTHWARK,
LONDON, S.E.,

Engineers and Patentees of STEAM CRANES, DONKEY PUMPS, &c.

PATENT DONKEY PUMPS.

Ram.....	1½ in.....	2 in.....	2½ in.....	3 in.....	3½ in.....	4 in.....
*Gall. per hour..	250	400	650	1200	1500	2100
Approx. H.P.....	15	25	40	60	80	130
Price	£10 5	£13 10	£16	£18	£21	£24
					£28	£30
						£35

* Calculated at 200 strokes per minute.



BICKFORD'S PATENT SAFETY FUSE

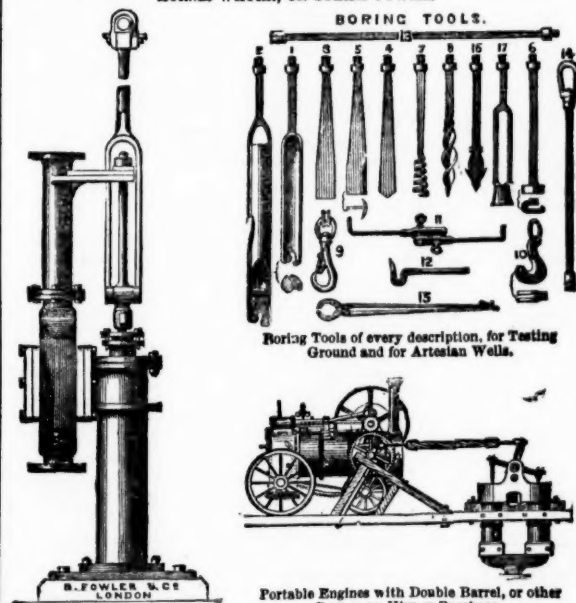
Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXHIBITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXHIBITION," in Paris, 1867.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

S. OWENS AND CO. (LATE CLINTON AND OWENS), WHITEFRIARS STREET, FLEET STREET, LONDON, E.C.,

HYDRAULIC AND GENERAL ENGINEERS,

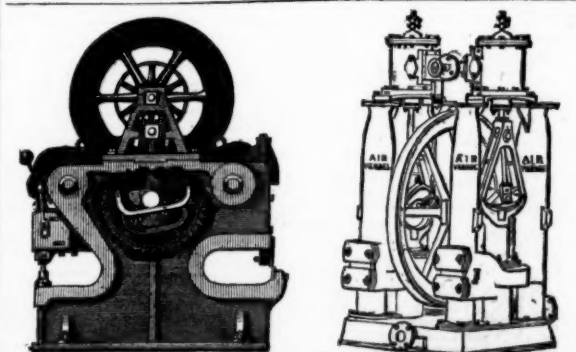
MANUFACTURERS OF PUMPS OF EVERY DESCRIPTION FOR HAND, HORSE, WATER, OR STEAM POWER.



Boring Tools of every description, for Testing Ground and for Artesian Wells.

Portable Engines with Double Barrel, or other Pumps, on Hire or Purchase.

Improved Double-action Pumps. Full information, Drawings, Price Lists, &c., relating to the above, and to Hydraulic Machinery of all descriptions—Cranes, Pulleys, Blocks, and Hoisting Tackle of superior manufacture—may be had on application.



JOHN CAMERON'S PATENT DOUBLE CAM LEVER PUNCHING AND SHEARING MACHINE, 1½ x 1¼ in. x 24 in.—5 tons, £185. WORKS, EGBERTON STREET, HULME, MANCHESTER.

JOHN CAMERON'S STEAM PUMPS, From 2 to 12 in. diameter, SINGLE AND DOUBLE-ACTING. WORKS, EGBERTON STREET, HULME, MANCHESTER.

